Canadian Natural

2022
STEWARDSHIP REPORT TO STAKEHOLDERS

Canadian Natural's Sustainability Report

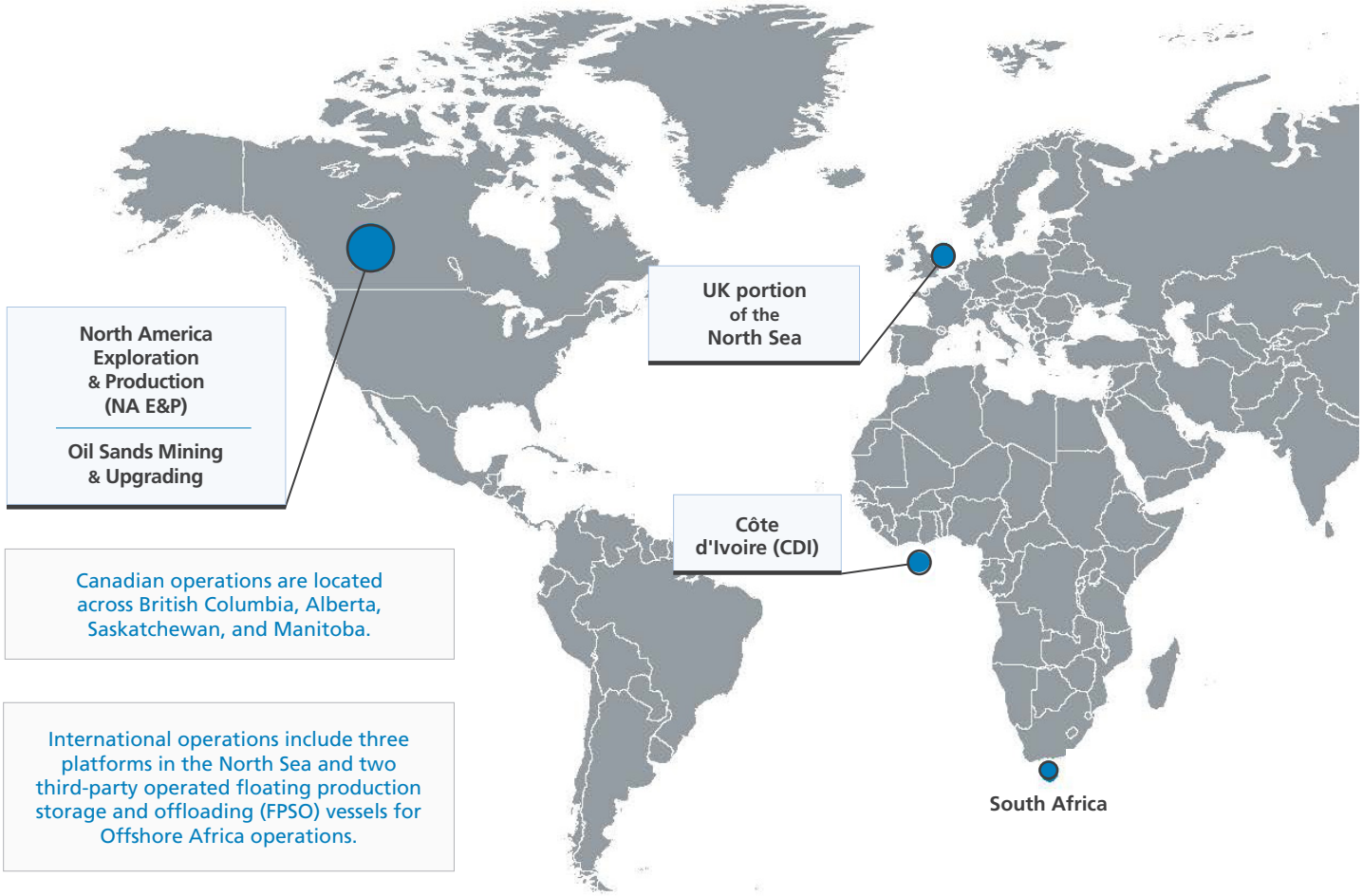
WE LIVE OUR MISSION STATEMENT

"To develop people to work together to create value for the company's shareholders by doing it right with fun and integrity."

Who We Are

Canadian Natural has a balanced and diverse portfolio of assets, primarily Canadian-based, with international exposure in the UK section of the North Sea and Offshore Africa. Canadian Natural's production is well balanced between synthetic crude oil, light crude oil, heavy crude oil, bitumen, natural gas and natural gas liquids (NGLs). This balance provides optionality for capital investments, maximizing value for our stakeholders.

We are committed to a long-term presence in the communities where we operate. Our activities create value by providing employment, business development opportunities, and significant revenues to governments. These revenues are a resource for spending on goods and services, as well as essential resources for public services, including health, safety, education and training. We are proud to responsibly produce a valuable resource that is used across the world to power people's lives.



Canadian operations are located across British Columbia, Alberta, Saskatchewan, and Manitoba.

International operations include three platforms in the North Sea and two third-party operated floating production storage and offloading (FPSO) vessels for Offshore Africa operations.

Cover Photo
Canadian Natural's Jackfish facility.

Many of the photographs in this report were provided by Canadian Natural staff. We would like to thank those who contributed pictures to this edition of the Sustainability Report.

About This Report

This Stewardship Report to Stakeholders, Canadian Natural's sustainability report, covers topics determined material by an internal assessment process where disclosures were rated for relevancy to our external stakeholders and operations.

Material topics highlighted in this report reflect the following categories:

- Climate (Governance, Strategy, GHG reduction)
- Workplace and Process Safety
- Community and Indigenous Relations
- Environment (spill prevention, water stewardship, biodiversity)
- Tailings Management and Dam Safety

Ongoing investor and stakeholder engagement helps us understand relevant factors viewed as important. As a result, our reporting levels for sustainability performance are regularly assessed for potential enhancement and to ensure value for all stakeholders.

Our Board of Directors also provides expertise and oversight on Environment, Social and Governance (ESG) factors through the Health, Safety, Asset Integrity and Environmental (HSAI&E) Committee, and the Nominating, Governance and Risk Committee. Performance results are reported internally through a management review process.

This annual sustainability report covers performance and activities from January 1 to December 31, 2022. It may include ongoing projects (started before 2022), cumulative data and projects we anticipate to work on beyond 2022. Unless otherwise stated, the following information and data is presented on an operational control basis.

Reporting Frameworks

Our external reporting integrates financial and sustainability metrics to align with recommendations from the:

- Task Force on Climate-Related Financial Disclosures (TCFD)
- Sustainability Accounting Standards Board (SASB)
- Global Reporting Initiative (GRI)

Canadian Natural's sustainability reporting is captured in this report, the CDP Climate Change and Water Questionnaires, our Sustainability Reporting Content Indices, and financial disclosures, such as our Annual Information Form, Management Information Circular, Annual Report, and on our website, www.cnrl.com.

United Nations' Sustainable Development Goals

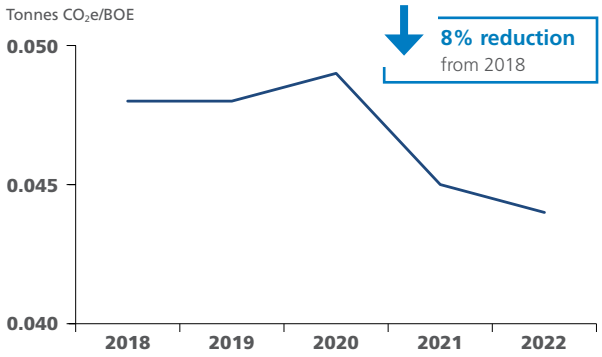
The United Nations (UN) relates general social and health outcomes to increased access to affordable energy and improved energy efficiency. Canadian Natural's activities contribute to the UN Sustainable Development Goals (SDGs). The most relevant SDGs we align with are:

- **Goal 4:** Quality Education
- **Goal 5:** Gender Equality
- **Goal 6:** Clean Water and Sanitation
- **Goal 7:** Affordable and Clean Energy
- **Goal 8:** Decent Work and Economic Growth
- **Goal 9:** Industry, Innovation and Infrastructure
- **Goal 12:** Responsible Consumption and Production
- **Goal 13:** Climate Action
- **Goal 15:** Life on Land

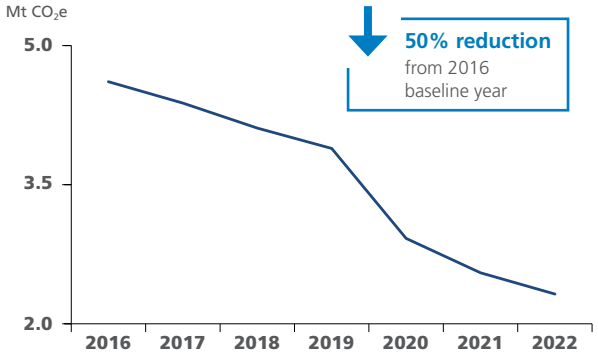
For more information on our specific alignment with the SDGs, see our Sustainability Reporting Content Indices.

GHG EMISSIONS MANAGEMENT

Corporate Scope 1 (Direct) GHG Emissions Intensity



North America E&P Methane Emissions



10.4 million tonnes of CO_2e conserved in primary heavy crude oil and in situ operations since 2018

GHG EMISSIONS MANAGEMENT STRATEGY

- **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, utilization, sequestration and storage (CCUS)**
- **Engaging proactively in policy and regulation** to effectively manage climate risks and opportunities, including trading capacity and offsetting emissions
- **Reviewing and developing new business opportunities and trends** that present further opportunities to reduce our environmental footprint

GOVERNANCE

ESG performance is linked to **executive compensation** (15% of total weighting)

Board members with relevant experience

8 in Climate Change/Carbon Policy and Emissions
10 in Health, Safety and Environment
12 in Risk Management

TARGETS

Net zero in our oil sands operations by 2050 through Pathways Alliance

40% reduction
in corporate absolute Scope 1&2 GHG Emissions by 2035 from 2020 baseline

50% reduction
in NA E&P Methane Emissions by 2030 from 2016 baseline

40% reduction
in in situ fresh water use intensity by 2026 from 2017 baseline

40% reduction
in oil sands mining fresh river water use intensity by 2026 from 2017 baseline

TECHNOLOGY AND INNOVATION

R&D leader in the Canadian crude oil and natural gas industry[1]

$587 million invested
in technology development and deployment in 2022[2]

$151 million invested
in technology development and implementation to reduce GHG emissions in 2022

1. *Research InfoSource, Canada's Top 100 Corporate R&D Spenders 2022.*
2. *Technology Development includes R&D with academic institutions, eligible Scientific Research and Experimental Development claims for Canadian income tax purposes, and other activities that create or deploy new technology, or improve existing technology.*

LEADERSHIP IN CCUS PROJECTS

2.7 million tonnes of CO_2e per year total capture capacity the same as taking ~576,000 passenger vehicles off the road per year

7.7 million tonnes of CO_2e captured and safely stored at Quest since 2015

Largest owner of carbon capture capacity in the Canadian crude oil and natural gas sector; 6th largest globally[3]

3. *Based on data from the Global Carbon Capture Institute.*

RECLAMATION

8.6 million trees planted across operations to date

1.2 million trees planted across operations in 2022

12,641 hectares reclaimed in NA E&P since 2016

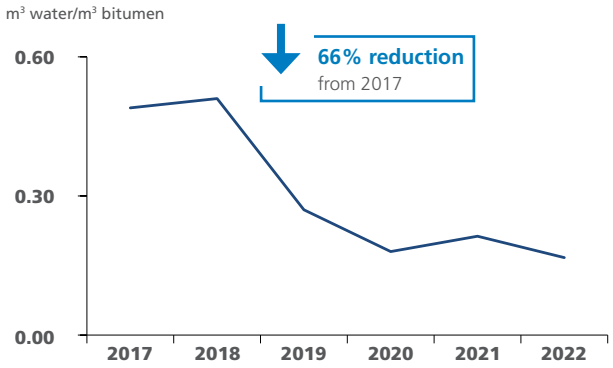
3,121 inactive wells abandoned in NA E&P in 2022

1,057 reclamation certificates submitted in NA E&P in 2022; equivalent to ~1,444 Canadian football fields

2023 goal of >1,200 reclamation certificates per year

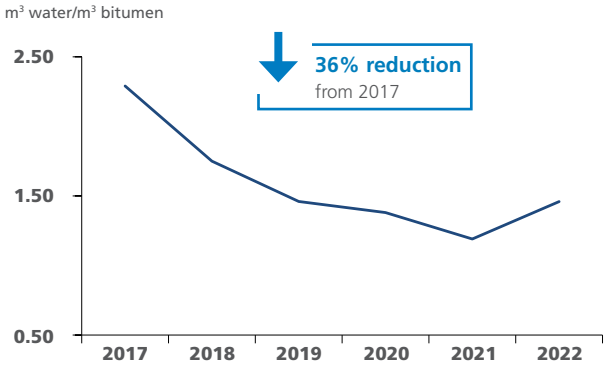
WATER USE

In Situ Fresh Water Use Intensity



Includes Alberta thermal in situ facilities. In situ fresh water use intensity has decreased from 2021 due to increased use of treated process water and saline water sources in operations.

Oil Sands Mining River Water Use Intensity



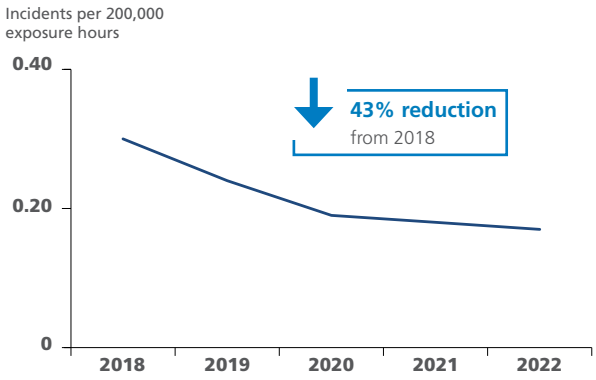
Includes river water and tributaries. Fresh river water use intensity increased from 2021 to 2022 due to temporary operational constraints that reduced the water availability from the Horizon tailings pond for reuse in our operations and led to higher river water withdrawals. Constraints were resolved in 2022 and we are targeting improved intensity for 2023.

83% recycle rate of produced water in in situ operations

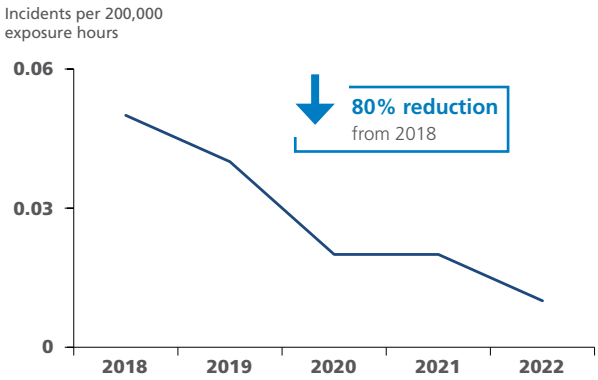
83% recycle rate of surface water in oil sands mining

WORKPLACE SAFETY AND PROCESS SAFETY

Corporate Total Recordable Injury Frequency (TRIF) (Employees and Contractors)[1]



Corporate Lost Time Incident (LTI) Frequency (Employees and Contractors)[1]



1. *Revised to align with Energy Safety Canada's methodology.*

54% reduction in Tier 1 and Tier 2 process safety events from 2018

AAA rating for tailings management and dam safety, the highest rating in the Mining Association of Canada's Towards Sustainable Mining Framework

>78,000 Worksite Safety Observations proactively identifying improvement opportunities

ECONOMIC CONTRIBUTIONS AND COMMUNITY

87,755 full-time equivalent jobs supported by operational and capital spending

Jobs breakdown:

- **22,401** direct
- **44,341** indirect (suppliers)
- **21,013** induced (economy at large)

$14.2 billion of capital and operational spending providing significant economic contribution and support for jobs across our operations in 2022

$10.6 billion in contributions to governments and local communities in 2022

Including:

- Royalties **$7.2 billion**
- Corporate taxes **$2.9 billion**
- Property taxes **$344 million**
- Surface and mineral land leases **$183 million**

$9 billion total supply chain spending with ~9,000 suppliers worldwide

$684 million in contracts a 20% increase from 2021, **with 167 Indigenous businesses**

Message to Stakeholders

As a leader on Environment, Social and Governance (ESG), Canadian Natural produces crude oil and natural gas safely, effectively and efficiently, making it a priority to work collaboratively with stakeholders, industry peers and governments to improve environmental performance.

Ensuring a globally competitive Canadian crude oil and natural gas industry while finding more opportunities to reduce greenhouse gas emissions (GHG) remains important. In 2022, global events and market volatility continued to reinforce the importance and need for affordable, secure and responsibly produced energy.

Canada's responsibly produced crude oil and natural gas are well-positioned to support energy security along with providing substantial social and economic benefits for Canadians in the form of jobs and government revenues. In this context, Canadian Natural's long life low decline oil sands assets have an advantage, as we leverage technology, innovation and continuous improvement to support Canada's climate and economic goals.

In This Report

Canadian Natural is proud to share our 2022 sustainability report, which features many examples of our teams delivering operational excellence and continuous improvement. Highlights from our 2022 performance include:

- 43% reduction in Total Recordable Injury Frequency (TRIF) since 2018
- $587 million invested in research, and technology development and deployment, with $151 million in GHG technology and implementation projects
- Announced a new environmental target, a 40% reduction in corporate scope 1 and 2 absolute GHG emissions by 2035, from a 2020 baseline
- Abandoned 3,121 inactive wells in our North America Exploration and Production operations, a company record
- Secured $684 million in contracts with Indigenous businesses, a 20% increase from 2021
- Maintained our AAA rating for tailings management for our Horizon and Albian operations, the highest rating that can be achieved in the Mining Association of Canada's Towards Sustainable Mining Framework

Behind every safety achievement, environmental footprint reduction and barrel produced, is our dedicated and committed workforce. Our staff works hard to live our mission statement every day: To develop people to work together to create value for the company's shareholders by doing it right with fun and integrity.

Pumpjack in our Fairview operations in Alberta.

Working Together — Canada's Opportunity

Canada has an opportunity to be a leader in providing reliable and affordable energy for the country and the world for the long term. To seize this opportunity, Canada should move forward with building large-scale carbon capture and storage (CCS) projects, like the Pathways Alliance's foundational project, to significantly reduce GHG emissions and align with the Alberta and federal government's shared ambition for net zero by 2050.

The Pathways Alliance plan and the sector's progress on GHG reduction efforts require all of us to work together, including federal and provincial governments, Indigenous communities, and local stakeholders.

Together, we can provide ESG-leading crude oil and natural gas that the world needs and ensure an economically prosperous future for Canada.

N. MURRAY EDWARDS
Executive Chairman

TIM S. MCKAY
President

DEAN W. HALEWICH
Senior Vice-President, Safety, Risk Management & Innovation

Steam generators at Jackfish operations.

Producing an ESG-leading Barrel: Canadian Natural's Advantages

Canadian Natural's mission statement provides the foundation for our approach to ESG that reflects a long-term commitment to sustainable development and creating value for stakeholders. Our development strategy is aligned with producing the leading ESG barrel. To get there, we integrate ESG into key aspects of our corporate strategy:

Diverse, Balanced Asset Base

Strategically developed and managed over decades, our top-tier assets are balanced between synthetic crude oil, light crude oil, heavy crude oil, bitumen, natural gas and natural gas liquids. We believe this differentiates us from our peers and helps us maximize value for our stakeholders.

Natural gas production has an important role in the energy transition as a reliable and affordable energy source for power generation. Electricity from natural gas can be started and stopped according to demand – adding to its benefits as a reliable, base energy source.

Long Life, Low Decline Assets

Canadian Natural's diverse portfolio is supported by long life low decline oil sands assets, which have low-risk, high-value reserves that require low-maintenance capital.

This allows us to remain flexible with our capital allocation and maximize value. Our infrastructure is ideal for piloting and applying carbon reduction technologies, including continued investments into carbon capture, utilization and storage (CCUS) projects.

Effective and Efficient Operations

Our strengths include our extensive area knowledge to maintain effective and efficient operations. We maintain a high working interest and operator status in the majority of Canadian Natural's properties, providing opportunities to invest in and pilot new technologies to reduce emissions.

Investing in Technology and Innovation for Continuous Improvement

Canadian Natural has a culture of continuous improvement. Investing in research and technology to drive performance improvements is key to our success. In 2022, we invested approximately $587 million[1] in technology development and deployment, making us leaders in technology research and development in the Canadian energy industry[2].

Collaborating to Reach Net Zero in the Oil Sands

Our expertise and investments are leveraged through our collaboration with industry and government to advance initiatives like the Pathways Alliance. The goal of this unique alliance is to work collectively with the federal and Alberta governments to achieve net zero GHG emissions from oil sands operations by 2050 to help Canada meet its climate goals.

As a leader in CCS with 2.7 Mt CO_2e/year current total capture capacity, Canadian Natural has the experience and expertise to accelerate these opportunities.

2022 Economic Contributions

Canadian Natural is committed to delivering responsibly produced energy to help meet global energy demand, while creating jobs and economic value for Canadians

87,755 full-time equivalent jobs supported by operational and capital spending

$14.2 billion of capital and operational spending

$10.6 billion in contributions to governments and for local communities

$7.2 billion in royalties
$2.9 billion in corporate taxes
$344 million in property taxes
$183 million in surface and mineral land leases

$9 billion total supply chain spending with ~9,000 suppliers worldwide

1. *Technology Development includes R&D with academic institutions, eligible Scientific Research and Experimental Development claims for Canadian income tax purposes, and other activities that create or deploy new technology, or improve existing technology.*
2. *Research InfoSource, Canada's Top 100 Corporate R&D Spenders 2022*

Canada's Opportunity

Energy Security and Climate Change

Our country is among the most responsible crude oil and natural gas producing jurisdictions globally. This is the result of the Government of Canada's commitments combined with climate frameworks in Canadian jurisdictions and the continuing performance of the crude oil and natural gas industry in reducing GHG emissions.

Global events and concerns about energy security have further underscored the need and importance of affordable, secure and responsibly produced energy to meet global demand. Actions taken by the oil and natural gas industry to reduce emissions positions Canada to play a larger role in supporting global energy security.

World-leading Standards

Canada's natural resources are safely and responsibly developed with world-leading standards. The country has the world's third-largest oil reserves, some of the most stringent regulations and standards of anywhere in the world, a strong track record for technology development, and an established reputation of industry working together with Indigenous communities and municipalities.

Reducing Emissions Together

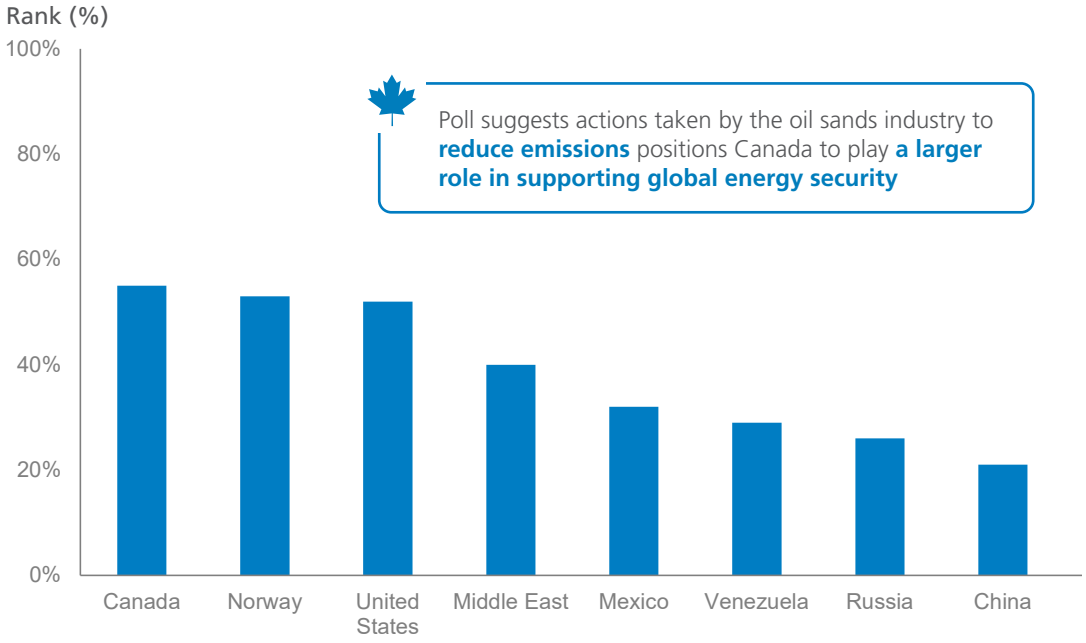
Canadian Natural supports Canada's leadership in the Paris Agreement to hold the increase of global average temperature to below 2°C and pursuing efforts to limit the temperature increase to 1.5°C by reducing emissions and driving innovation. We also support the federal and provincial governments' commitments to reduce methane emissions.

Canadian Natural recognizes the need to reduce GHG emissions across our operations. We are minimizing our environmental footprint by working together with the Canadian crude oil and natural gas sector, technology providers, other industries, and stakeholders. We are building on the progress we have made and will continue to deliver results by leveraging technology and Canadian ingenuity.

Canada's crude oil and natural gas industry continues to deliver leading ESG performance amongst the top crude oil exporting countries.

Energy Security

Opportunity to Address Global Energy Demand and Climate Change



Source: IPSOS Poll, a sample of 24,014 global respondents in 28 countries were interviewed between Nov 18-Dec 6, 2022

Governance

Canadian Natural remains committed to managing sustainability and continuing our track record of creating value for our shareholders. Environmental stewardship is integrated into our operations with our Board of Directors (Board) in key governance roles.

The Board is responsible for overseeing and ensuring Canadian Natural has appropriate and effective measures in place to create and execute our ESG strategies, including management of climate-related issues and opportunities.

Risk Management from the Top Down

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. This allows teams to better understand the identified risks, their impacts on our operations and the mitigation being undertaken to address these risks.

Board Diversity

Canadian Natural believes that having a Board of Directors whose members are diverse in background and experience brings a broad perspective to enhance decision making for strong governance, guidance, and leadership.

The Board targets a composition where a minimum of 40% of its independent directors are women. This reflects appropriate gender diversity when the other factors relevant to Board effectiveness are considered. Three of our nine independent Directors are women (33.3%), and the Board is undertaking a comprehensive process to identify and recruit qualified female directors. The Board is committed to achieving this threshold before our next Annual General Meeting in 2024.

In addition to gender diversity, the Board continues to consider other aspects of diversity as part of its Board renewal efforts. The Board currently includes one individual that identifies as a member of an ethnic and visible minority.

Highlights

Board Members with relevant experience

8 members
in Climate Change/Carbon Policy & Emissions

10 members
in Health, Safety and Environment

12 members
in Risk Management

3 of 9 independent directors are women (33.33%)

Sunrise over our Dunvegan operations near Fairview, Alberta.

Board Oversight of Climate Change and Environmental Risks and Opportunities

Canadian Natural's Board of Directors provides expertise and oversight on ESG factors, through the Health, Safety, Asset Integrity and Environmental (HSAI&E) Committee, and the Nominating, Governance and Risk Committee. This consists of environmental matters, including climate change related risk and opportunities.

For more information on our governance model for sustainability matters, our Performance Scorecard and our approach to risk management, visit our website for our annual financial disclosure documents and our most recent CDP Climate submission.

Lobbying Activity Alignment

Canadian Natural participates in public policy discussions on issues relevant to our business and regularly communicates with governments in jurisdictions where we operate.

We ensure alignment between climate change strategy, advocacy positions and engagement activities through robust processes and ongoing communications between senior management and core technical teams.

Climate-related advocacy priorities and lobbying activities are reported quarterly to the HSAI&E Committee and discussed as needed.

Canadian Natural supports Canada's leadership in the Paris Agreement to limit global warming to below 2°C as a pathway to reduce emissions and drive innovation, as do our industry associations, including: Pathways Alliance, Canadian Association of Petroleum Producers (CAPP), Explorers and Producers Association of Canada (EPAC), Mining Association of Canada (MAC) and Offshore Energies UK (OEUK).

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.

Our responsible climate lobbying activity is demonstrated through our ongoing monitoring and dialogue with stakeholders, including industry associations, legislators and regulators. For more information on our participation in public policy, see our latest CDP Climate submission.

Aligning Sustainability Metrics to Compensation

Canadian Natural recognizes the significance of environmental performance on the overall performance of the company, with a 15% compensation weighting for the Safety, Asset Integrity and Environmental performance measure. The compensation program, including the compensation weighting, is reviewed continually by the Compensation Committee of the Board.

15% compensation weighting allocated to Safety, Asset Integrity and Environmental performance

Our performance scorecard aligns executive compensation with Canadian Natural's performance when measured against sustainability metrics. Performance is evaluated based on improvement from prior period results (e.g. corporate GHG intensity and methane emissions) and/or against target ranges determined by prior period performance.

Decision-making with ESG in Mind

Canadian Natural is committed to environmental stewardship throughout the decision-making process. Our company has cross-disciplinary steering committees designed to determine new processes and projects to meet our environmental stewardship goals and objectives.

For example, our Conventional GHG Steering Committee works with teams across our conventional operations to identify, propose and progress new GHG reduction projects and processes with a focus on methane emissions reductions.

Environmental, social, economic and health considerations are evaluated in new project designs and in operations to improve environmental performance. Processes are employed to avoid, mitigate and minimize environmental effects.

Reclaimed operating area in Saskatchewan.

Climate and GHG Emissions Management

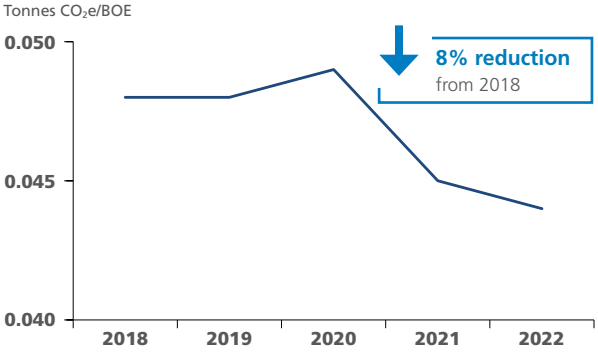
For more than three decades, Canadian Natural has been a safe, effective and efficient producer of crude oil and natural gas, meeting or exceeding regulatory standards. Our commitment to GHG reductions led to co-founding the Pathways Alliance, working together with governments to achieve net zero GHG emissions from oil sands operations by 2050 to help Canada meet its climate goals.

2022 Emissions Reductions

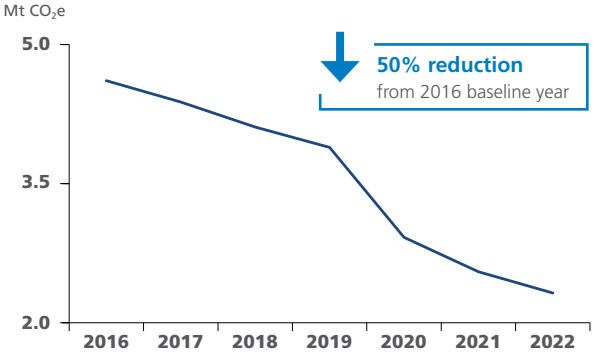
Canadian Natural's continuous improvement culture delivered reductions in GHG emissions. This includes reductions of absolute methane emissions in 2022 of approximately 10% in North America E&P that helped us meet our target of 50% by 2030 from a 2016 baseline.

Canadian Natural continually reviews our environmental targets to ensure that they are meaningful and drive continuous improvement across our operations.

Corporate Scope 1 (Direct) GHG Emissions Intensity



North America E&P Methane Emissions



Performance Highlights

$587 million invested in technology development and deployment in 2022[1]

$151 million invested in technology development and deployment to reduce GHG emissions in 2022

Largest owner of carbon capture capacity in the Canadian crude oil and natural gas sector (based on data from the Global Carbon Capture Institute)

Third-party independent reasonable assurance on our 2022 Scope 1&2 emissions, including methane emissions

Third-party independent limited assurance on our 2022 Scope 3 emissions

1. *Technology Development includes R&D with academic institutions, eligible Scientific Research and Experimental Development claims for Canadian income tax purposes, and other activities that create or deploy new technology, or improve existing technology.*

Resiliency of Canadian Natural's Strategy

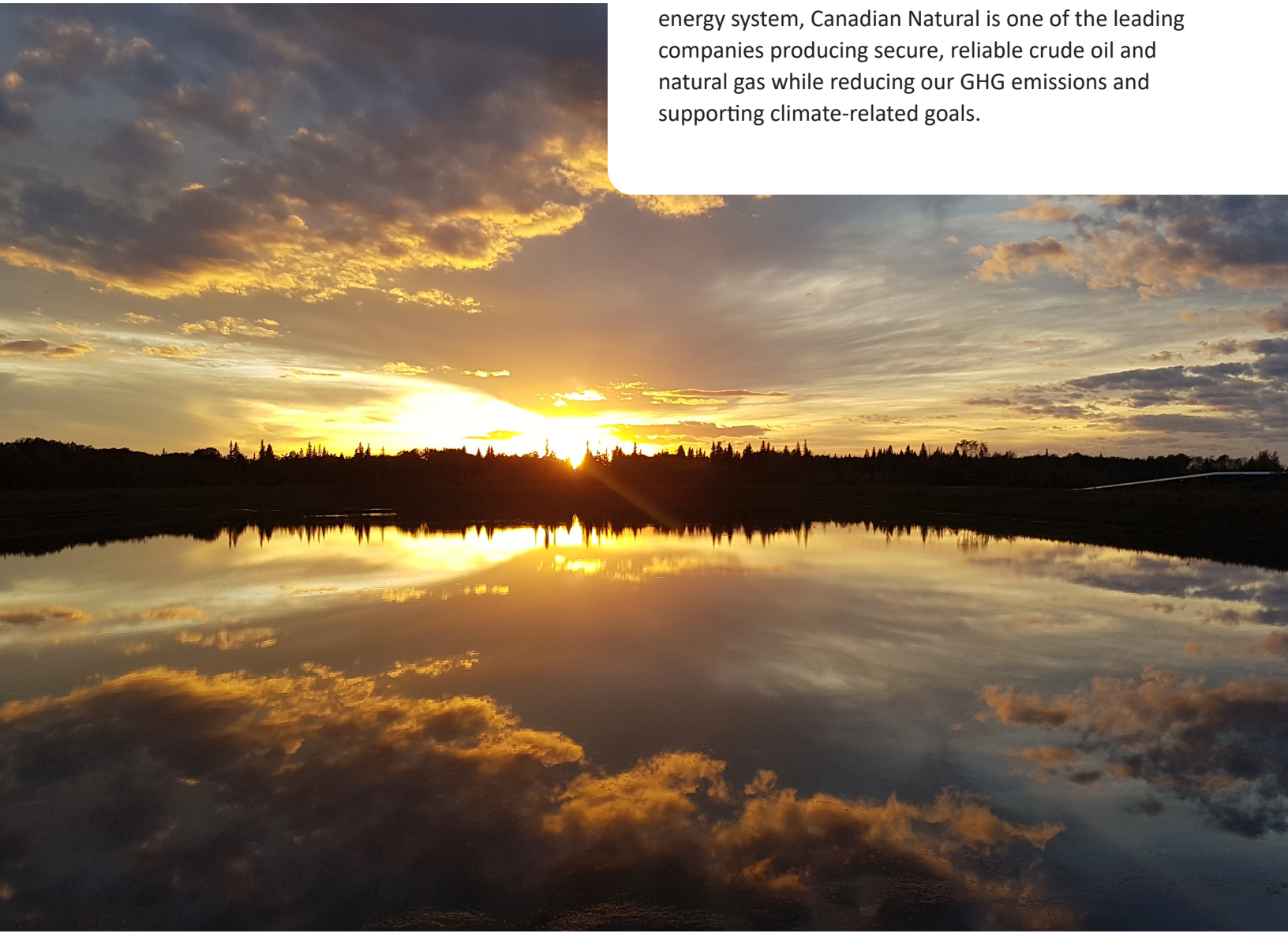
As part of evaluating climate change related risk and opportunities, Canadian Natural reviews independent external scenario analyses developed by energy firms and agencies representing a range of global crude oil and natural gas demand levels through 2050.

We have reviewed scenarios that model assumptions, 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 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, Canadian Natural considers 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.

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 that 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.



Wetlands near our Primrose East plant.

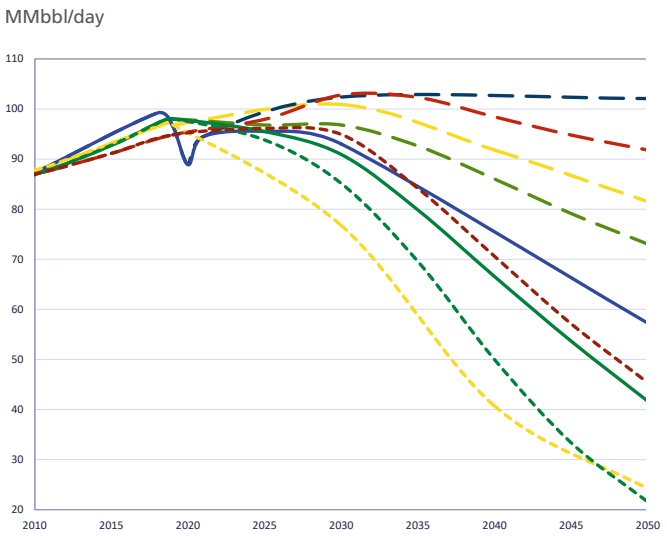
Canadian Natural has an integrated GHG Emissions Management Strategy to ensure our resiliency in the short, medium and long term. Our strategy remains focused on investments in CCUS projects, as a co-founder of the Pathways Alliance, and employing significant resources to reduce our methane emissions along with investing in natural gas production, a clean burning hydrocarbon.

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, 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, Canadian Natural is 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 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.

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.

Global Crude Oil Demand Scenarios

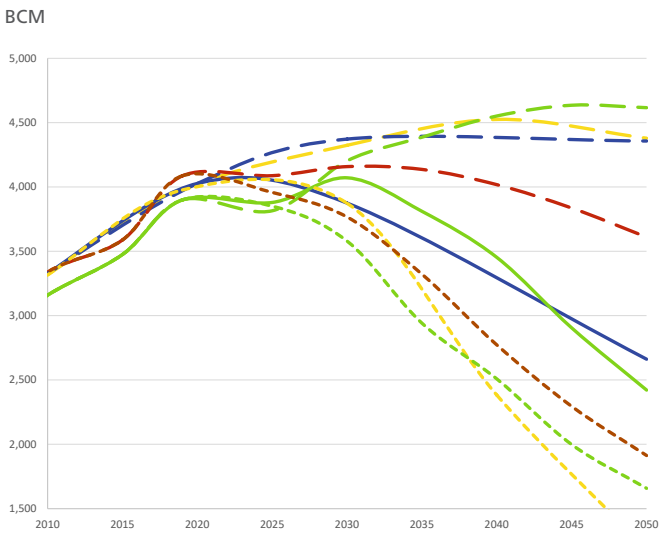


Current Climate Policy Scenarios
- Equinor Energy Perspectives - Walls
- IEA WEO - Stated Policies Scenario (STEPS)
- BP Energy Outlook 2023 - New Momemtum Scenario
- Shell - Archipelagos

Increased Climate Ambition Scenarios
- IEA WEO - Announced Pledges Scenario (APS)
- BP Energy Outlook 2023 - Accelerated Scenario

Limit Global Warming to 1.5° Scenarios
- Equinor Energy Perspectives - Bridges
- BP Energy Outlook 2023 - Net Zero Scenario
- Shell - Sky 2050

Global Natural Gas Demand Scenarios



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- BP Energy Outlook 2023 - Accelerated Scenario

Limit Global Warming to 1.5° Scenarios
- Equinor Energy Perspectives - Bridges
- BP Energy Outlook 2023 - Net Zero Scenario
- Shell - Sky 2050

New Absolute Corporate GHG Emissions Reduction Target

Canadian Natural has a strong commitment to improving environmental performance with robust targets previously established for methane emissions and water use intensities. In November 2022, Canadian Natural announced the addition of a new GHG reduction target, a 40% reduction in corporate absolute scope 1 & 2 GHG emissions by 2035. The new target encompasses the company's total scope 1 and 2 absolute emissions.

Senior management challenged the business units to propose a meaningful company-wide target. They answered that 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.

Delivering on this commitment will be driven by the employees and operations staff, who are on the front lines doing the hard work to make the reductions happen. This ambitious target will be achieved by our teams collaborating, working together across business units, with external partners and governments.

Setting a target based on absolute emissions demonstrates Canadian Natural's commitment to reducing our carbon footprint while supporting Canada's overall environmental goals.

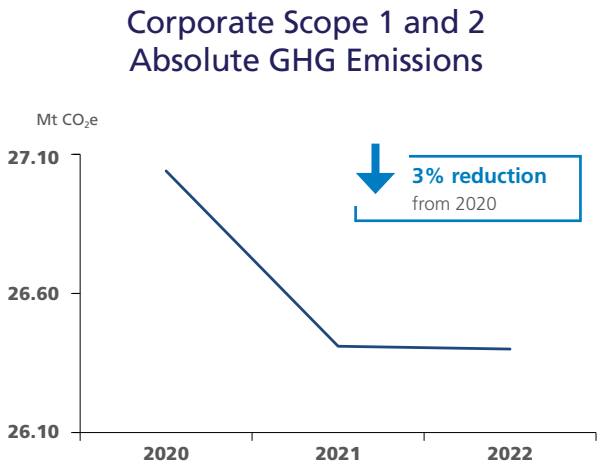
Corporate GHG Reduction Target

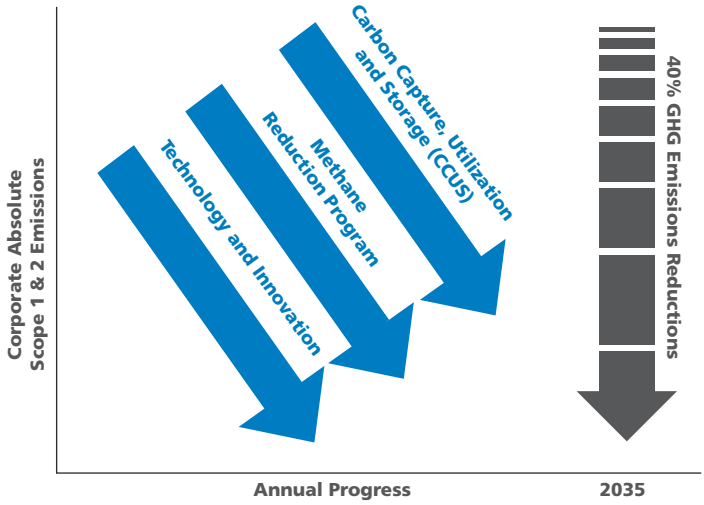
40% reduction
of absolute Scope 1&2 GHG Emissions by 2035 from 2020 baseline

Methane Reduction Target

50% reduction
NA E&P Methane Emissions by 2030 from 2016 baseline

Net zero in our oil sands operations by 2050 through Pathways Alliance





Long-term Sustainability: Our GHG Management Strategy

Canadian Natural and the Canadian crude oil and natural gas sector are delivering game-changing environmental performance.

Canadian Natural's significant long life, low decline oil sands resources with manufacturing-like operations represent one of the clearest routes to net zero emissions of any global crude oil asset.

Investing in technology and innovation, as well as continuous improvement projects, is integrated into our projects and budgeting process.

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.

Canadian Natural's GHG management strategy is led by a core technical team that identifies projects and initiatives that support our overall GHG emissions reduction strategy.

This multidisciplinary team looks to leverage technology and evaluate opportunities for further development. For more information on our GHG emissions management approach, read our CDP Climate Submission.

Our Integrated GHG Emissions Management Strategy

- **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, utilization, sequestration and storage**
- **Engaging proactively in policy and regulation** to effectively manage climate risks and opportunities, including trading capacity and offsetting emissions
- **Reviewing and developing new business opportunities and trends** that present further opportunities to reduce our environmental footprint

GHG Management Strategy — Three Areas of Focus

Carbon Capture, Utilization and Storage (CCUS)

- Leveraging carbon capture and storage expertise
- Pathways Alliance projects
- Enhanced Oil Recovery

Methane Emissions Reductions

- Pneumatic retrofits
- Heavy oil venting reduction projects
- Enhanced detection and measurement of technologies for fugitive emissions

Technology, Innovation and Implementation

- Solvent Enhanced Oil Recovery
- Cogeneration
- Continuous improvement opportunities
- Investment into emerging technologies

Area of Focus: Carbon Capture, Utilization and Storage (CCUS)

Canadian Natural's long-term aspiration to net zero emissions in our oil sands operations is a journey that includes advancing technologies and ongoing investment in carbon capture initiatives.

With ~2.7 Mt CO_2e/year total capture capacity, Canadian Natural is currently the largest owner of carbon capture capacity in the Canadian crude oil and natural gas sector, according to the Global Carbon Capture Institute. We have significant technical expertise in CCS and are seeing the GHG reduction benefits of this technology.

For example, since 2017 at our Horizon oil sands operations, we capture CO_2 from our hydrogen plant and add it to our tailings – reducing GHG emissions and helping accelerate our tailings reclamation.

Our CO_2 capture plant is designed to capture up to 50 tonnes/hour of CO_2 from the hydrogen plant and inject it into the tailings. The plant has a capture capacity of ~400,000 tonnes of CO_2 annually. We continue to apply knowledge from this operation to other areas of the company.

Quest Carbon Capture and Storage (CCS) Project

The Quest CCS facility is located at the Scotford Upgrader and is part of the Athabasca Oil Sands Project (AOSP), of which Canadian Natural has a 70% ownership interest. The Quest CCS facility has safely captured and permanently stored 7.7 Mt CO_2e to the end of 2022.

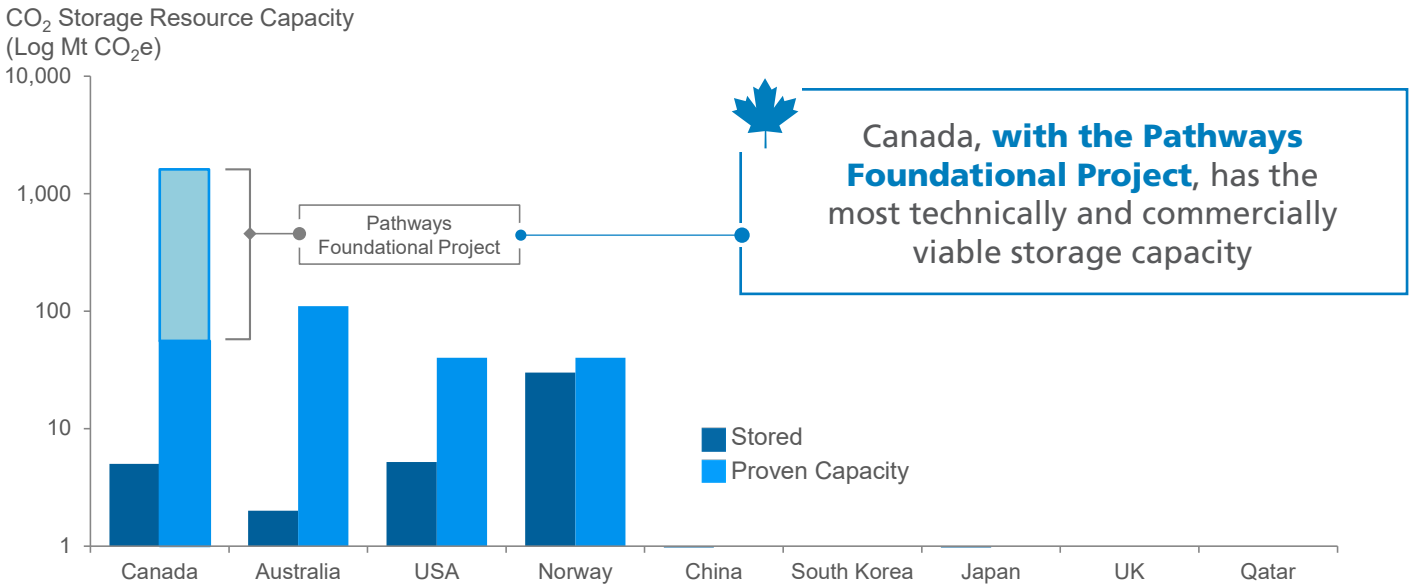
Carbon Capture and Enhanced Oil Recovery (EOR)

Canadian Natural is a 50% partner in the North West Redwater (NWR) Sturgeon Refinery, which supplies CO_2 to the Alberta Carbon Trunk Line (ACTL), an integrated system that can transport and store ~14.6 Mt CO_2/year for enhanced oil recovery (EOR). The refinery is the anchor supplier of CO_2 to the ACTL and can supply up to 1.2 Mt CO_2/year. At full capacity, the ACTL is the largest CCUS system in the world using captured industrial CO_2.

At our Hays Gas Plant, we also capture ~16,000 t CO_2/year for re-use/sequestration in our nearby Enchant EOR operations.

2.7 million tonnes of CO_2e/year total capture capacity; the same as taking ~576,000 passenger vehicles off the road per year

World Leading Canadian Subsurface CO_2 Storage



Canada, **with the Pathways Foundational Project**, has the most technically and commercially viable storage capacity

Note: *Countries with no data have some unproven storage capacity and are expected to develop in the future.*
Sources: *Global CCS Institute, OGCI, Storegga (2022), Global Storage Resource Assessment and Pathways Alliance.*

Partnering for GHG Emissions Reductions: Pathways Alliance

In 2021, Canadian Natural, along with Canada's other largest oil sands producers (representing 95% of Canada's oil sands production), formed the Pathways Alliance.

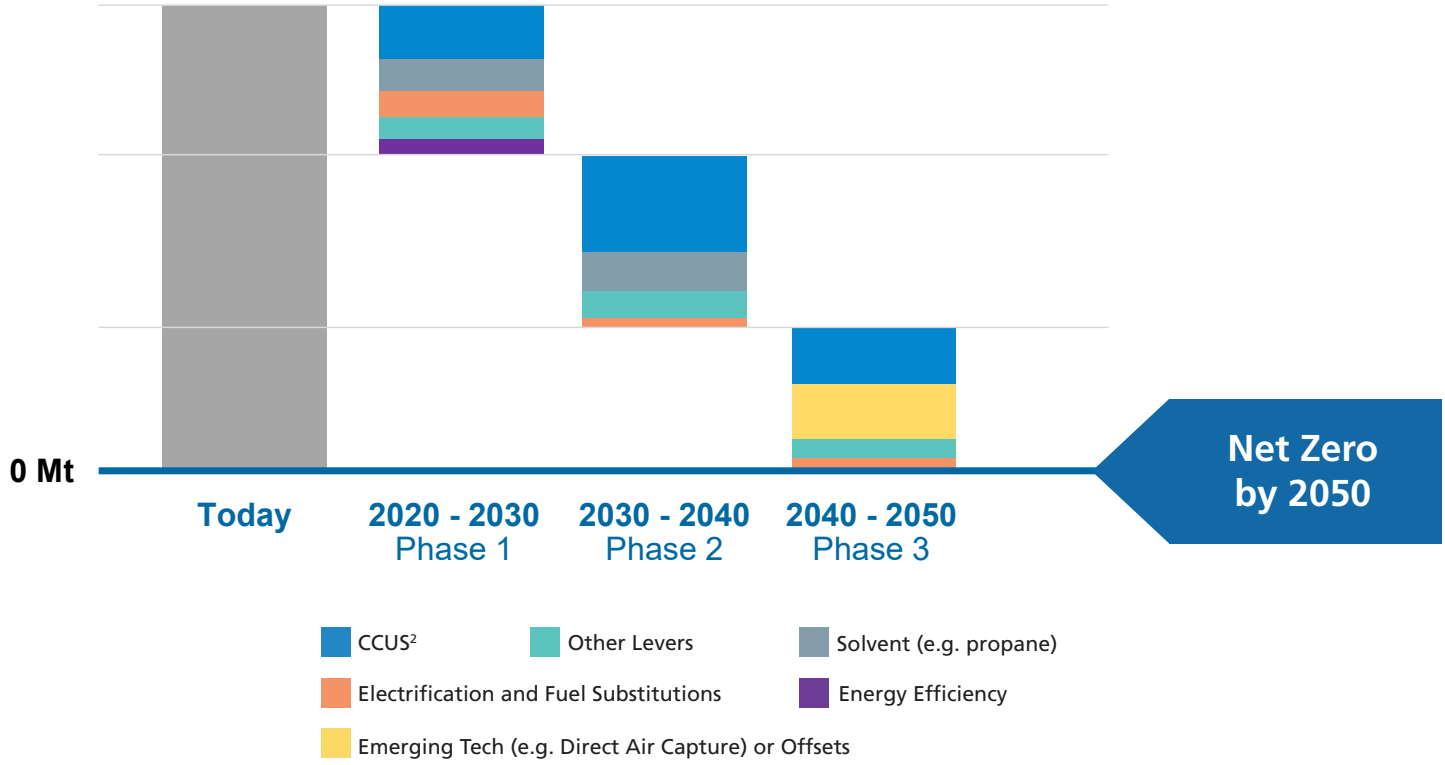
Pathways members are working collectively with the federal and Alberta governments to achieve net zero GHG emissions from oil sands operations by 2050 to help Canada meet its climate goals.

Achieving net zero emissions from oil sands operations will require multiple pathways, including increased CO_2 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.

To learn more about the Pathways Alliance please visit pathwaysalliance.ca.

Pathways Alliance to Net Zero Plan

Proposed emissions reductions by phase[1]



1. *Magnitude of reductions in each decade can be adjusted based on chosen investment level.*
2. *Carbon capture in Phase 1. Phases 2 or 3 could include carbon capture technology, small modular reactors and/or hydrogen.*

Pathways Foundational Project

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.

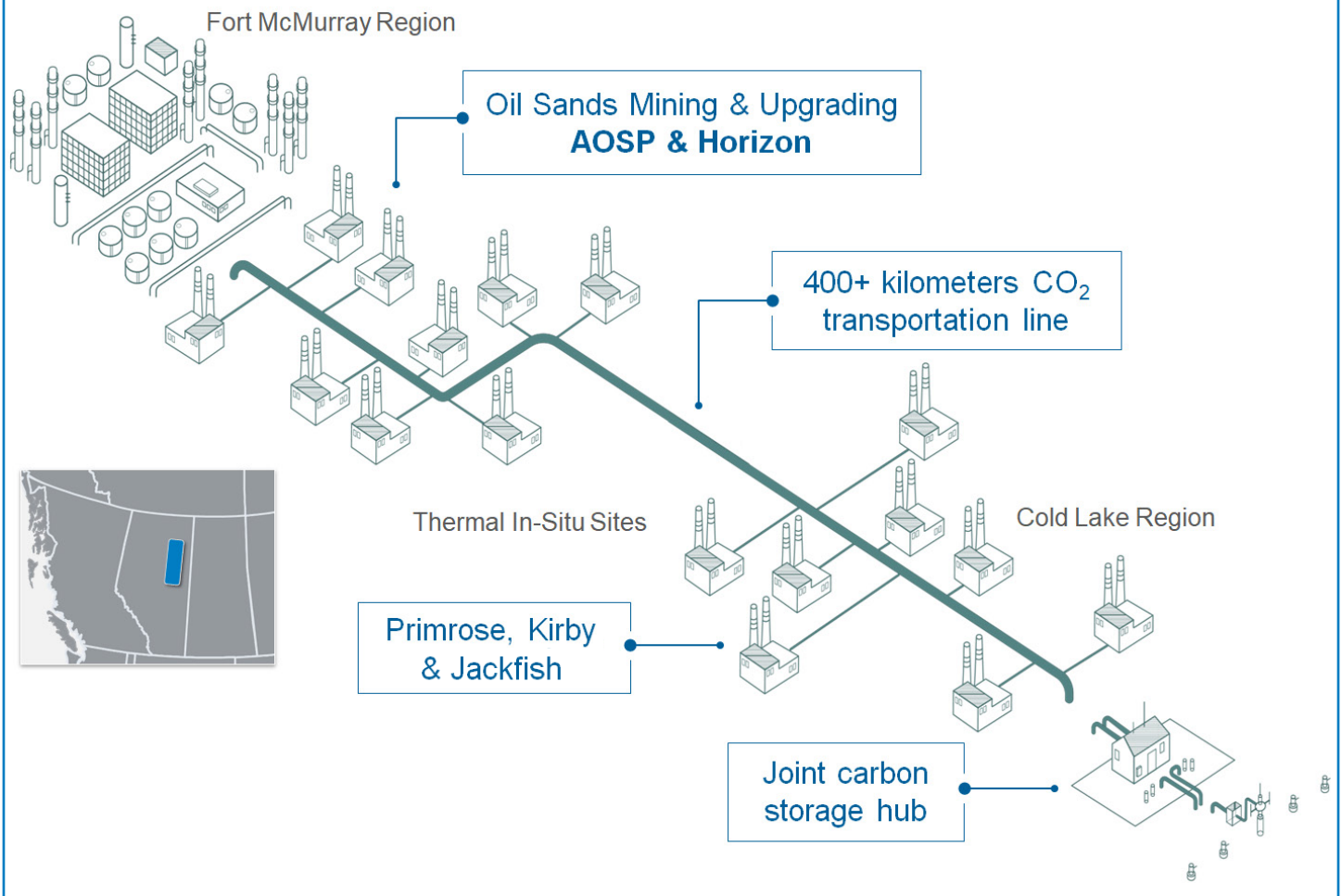
Currently there are more than 200 engineers and technical experts from Pathways Alliance companies advancing engineering and environmental work for the project application, refining carbon capture technology, and engaging Indigenous and other local communities along the proposed pipeline route.

The proposed line follows more than 95% of existing rights-of-way. The foundational project targets capture and storage of ~10-12 Mt CO_2e/year by 2030.

Detailed engineering design and a subsurface development plan is underway, including evaluation of data from two water injection test wells to refine our understanding of storage capability and capacity, and ensure safe, effective and efficient CO_2 sequestration.

We continue to work collaboratively with governments to help support fiscal and policy frameworks that are required for the project to proceed.

The Pathways Alliance Foundational Project



For illustrative purposes only.

Area of Focus: Methane Emissions Reduction

Our focused methane reduction program has significantly reduced our absolute methane volumes by 50% since 2016, helping us meet our 2030 methane reduction target. We continue to leverage technology and innovation to further reduce methane emissions in support of our corporate absolute 40% Scope 1 and 2 GHG emissions reduction target.

Led by our Conventional GHG Steering Committee of senior leaders and technical experts, our program focuses on a range of methane reduction projects, including emissions arising from venting (controlled release of gases) and pneumatic devices that control natural gas pressure/flow.

Methane Reductions In Conventional and Thermal Operations

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 CO_2e/year.

Reducing Methane Emissions in Heavy Oil

Canadian Natural continues to invest in solution gas conservation projects to reduce venting in our primary heavy oil operations. 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 CO_2e. In 2022, we completed 244 solution gas conservation projects resulting in a reduction of ~0.99 Mt CO_2e/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
- continuous improvement in facility design to reduce vented gas

Combustors continue to be installed in our heavy oil operations to reduce methane venting where solution gas cannot be conserved. 2022 installations resulted in reducing methane emissions by over 123,000 t CO_2e/year.

50% decrease in methane emissions in our NA E&P operations since 2016

32% decrease in volume of natural gas flared since 2018

Supplementing with Solar and Wind Power

At our Septimus operations in Northern British Columbia, we used the FIT process to identify and execute enhancements on the solar configurations used on some pad sites. Our team was looking for alternate power supply options for use in overcast conditions with low sunlight. Solar power was used as the main source of power with methanol generators engaged as backup.

By installing a wind turbine, enough power was produced to reduce the methanol generator's run time, saving on fuel usage as well as high maintenance repair costs. This technology has decreased the generator's runtime by 94%, reducing GHG emissions by 0.21 tonnes CO_2e/year. We are now exploring opportunities to apply this technology at other sites in our conventional operations.

Wind turbine and solar power at our Septimus operations.

Reducing Emissions from Pneumatics

Pneumatic devices use pressurized natural gas to function, some of which release low volumes of natural gas as part of their normal operation.

In our conventional operations, we have completed over 8,000 pneumatic retrofits and removals since 2018, resulting in a cumulative CO_2e reduction of approximately 815,000 tonnes/year. Of these projects, approximately 1,250 retrofits/removals equivalent to 122,000 t CO_2e/year were completed in 2022.

In 2022, Canadian Natural replaced approximately 710 pneumatic injection pumps, as part of a multi-year project to convert up to 3,800 pumps in our Alberta and British Columbia conventional areas to solar configurations. This project will help us reduce methane emissions by up to an additional 361,000 t CO_2e/year.

815,000 tonnes of CO_2e reduced since 2018 from pneumatic retrofits and removals

>8,000 pneumatic retrofits and removals since 2018

Fugitive Emissions Management Program (FEMP) for Leak Detection and Repair (LDAR)

Canadian Natural, with the support of Emissions Reduction Alberta and approval from the Alberta Energy Regulator, implemented the Alternative Fugitive Emissions Management Program pilots (Alt-FEMP) in 2021.

These pilots are deploying emerging vehicle and aerial based technologies at natural gas, light oil and heavy oil facilities in our NA E&P operations to evaluate technology performance and validate forecasted emission and cost reductions. Through these pilots, Canadian Natural conducted over 3,400 surveys in Alberta in 2022.

In addition to Alt-FEMP, Canadian Natural also conducted over 3,000 comprehensive fugitive emission surveys using optical gas imaging cameras and approximately 20,000 fugitive emission screenings at wells across our NA E&P operations. This enhanced technology is helping us reduce our methane emissions through faster leak detection.

For more information on our methane management activities, read our CDP Climate Submission.

Heavy oil tanks at our Bonnyville, Alberta operations.

Area of Focus: Technology, Innovation and Implementation

At Canadian Natural, we know technology and innovation are keys to success in a lower carbon emissions future. Together with our partners, we are investing in developing technologies to create value, enhance performance and reduce emissions today and into the future.

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.

Investing in Technology

Canadian Natural's long life low decline oil sands assets with large, concentrated operations and decades of reserves, provide the opportunity for investing in innovation improvements to achieve valuable long-term energy security and global GHG reductions.

In 2022, we invested $587 million in technology development and deployment[2], 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 steam 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.

R&D leader in the Canadian oil and natural gas industry[1]

$587 million invested in technology development and deployment in 2022[2]

$151 million invested in technology development and implementation to reduce GHG emissions in 2022

1. *Research InfoSource, Canada's Top 100 Corporate R&D Spenders 2022.*
2. *Technology Development includes R&D with academic institutions, eligible Scientific Research and Experimental Development claims for Canadian income tax purposes, and other activities that create or deploy new technology, or improve existing technology.*

Steam generators at our Jackfish facility.

Investing in Technology for Emissions Reductions

Current Actions

- Carbon capture, utilization and storage (CCUS)
  - Horizon's CCUS
  - Quest CSS
  - North West Refinery's CCUS Trunkline
  - Hays Gas Plant capture for enhanced oil recovery (EOR)
- Solvent EOR pilots
- Methane reductions
  - Enhanced detection and measurement of technologies for fugitive emissions
  - Pneumatic retrofits
  - Heavy oil venting reduction projects
- Ultra-low emissions heavy oil pad
- Cyclic CO_2 injection pilot
- Advanced data analytics/digital operationalization
- Water Technology Development Centre

Medium-Term Actions

- Leverage CCUS advancements and learnings into the next generation of CCUS facilities
- Molten carbonate fuel cells
- Solvent EOR commercialization
- In-pit extraction process
- Advanced data analytics/ digital operationalization
- High temperature reverse osmosis water treatment
- Technology to enhance water treatment and reduce GHG emissions

Long-Term Actions

- Expand/develop future CCUS projects
- Carbon capture and conversion opportunities (carbon fibers, plastics)
- Alternative fuels
- Advanced data analytics/digital operationalization
- Natural gas decarbonization
- Direct air capture
- Small modular reactors

For more information on projects we are supporting and examples of our investments into technology, read our 2022 Technology and Innovation Case Studies available on our website.

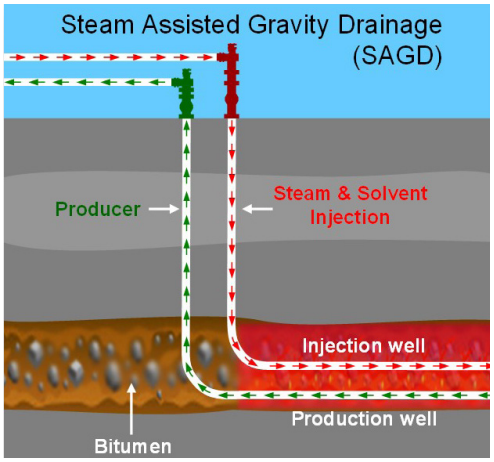
Sunrise behind a tank farm at our Horizon operations.

Investing in Solvent Enhanced Oil Recovery

Solvent technologies will have a significant role in creating value across all of our thermal operations on our journey to net zero in the oil sands.

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 ~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.



In typical SAGD oil production, water is heated to create steam that mixes with the bitumen and improves its viscosity so it can be pumped to the surface. When solvent is added, the SOR is significantly decreased.

At Primrose, in the steam flood area, a solvent injection two-year 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%.

Cogeneration to Reduce Emissions

Our oil sands mining and upgrading and Primrose and Wolf Lake thermal operations use natural gas to create power through cogeneration units. Cogeneration allows these facilities to simultaneously produce electricity and recover waste heat to meet the sites' steam and electricity demands.

Our energy consumption is lower than if we produced electricity and heat energy separately, resulting in lower emissions.

Carbon Conversion

Through our partnership with Inter Pipeline Ltd., we have been capturing the off-gas (natural gas liquids and olefins) from the Horizon upgrader. The liquids extracted are transported via pipeline to Inter Pipeline's Redwater facility.

The remaining gas, now cleaner, is sent back to our upgrader, mixed with natural gas and then used as lower emissions fuel. This project has avoided more than 847,000 t CO_2e emissions since 2016.

Reducing GHGs through Continuous Improvement

Our teams at the Wembley Oil Battery in Grande Prairie, Alberta, identified an opportunity to reduce the percentage of produced water in the inlet emulsion. Reducing the produced water in the inlet emulsion reduces the energy needed in the oil treatment process and increases facility-treating capacity.

The team installed a sales-gas/inlet-emulsion exchanger to capture and use waste heat – something that is not normally done in this type of system. This design improvement resulted in less heat loss, while increasing the oil treatment capacity of the facility. The success of the project resulted in an energy reduction of 62,000 GJ/year and a GHG emissions reduction of 4,300 t CO_2e/year.

Aerial view of the Wembley Oil Battery.

Integrating Emissions Reduction in Project Planning and Operations

Canadian Natural is committed to continuous improvement to reduce emissions while reducing costs. Innovation takes place in different ways, from step changes to incremental continuous improvement. We evaluate new tools and work to enable people to fully utilize the tools we have in place.

Canadian Natural encourages a culture of entrepreneurship where team members are involved in providing and developing solutions. Across our company, our teams are working together to pursue continuous improvement projects that are resulting in meaningful emissions reductions.

Conventional and Thermal Field Operations

The Field Improvement Technique (FIT) process helps employees and teams identify areas of improvement in safety, environment and costs. Teams in this area have executed almost 1,400 FIT projects since January 2018.

Our Jackfish project operations team used the FIT to optimize the routing of make-up water in the steam assisted gravity drainage (SAGD) process, allowing for improved heat integration and energy consumption, reducing GHG emissions.

Oil Sands Mining Operations

Teams used the Four Disciplines of Execution (4DX) based on the principles of focus, leverage, engagement and accountability to launch a project at our Albian operations. The project identified the opportunity to shorten haul truck distance by constructing a heavy hauler bridge. This will allow us to maintain production while reducing the fleet truck emissions, representing a total GHG reduction of over 32,000 t CO_2/year.

Teams at Albian also connected pumps and generators to the electrical grid to help reduce the need to run diesel generators, resulting in lower diesel consumption and GHG emissions reductions of ~350 t CO_2/year.

International Operations

In our International operations, Canadian Natural implemented single turbine operations and enhancements in natural gas compression across the North Sea, improving GHG emissions intensity.

> “By working together, and utilizing the FIT process and Lean Six Sigma tools, our Jackfish field and engineering teams were able to successfully trial methods to address the challenges and implement a permanent solution. The work adds significant value for the company, with key environmental, production efficiency and financial benefits.”
>
> **Omar Moussa,**
> *Engineer, Conventional Field Operations*

A heavy hauler on site.

Disrupting the Status Quo: Non-Combustion Products

Canadian Natural is exploring opportunities to convert bitumen from Alberta's oil sands into valuable products that do not require combustion, contributing towards reducing scope 3 emissions.

For example, we are collaborating with industry in projects like Bitumen Beyond Combustion (BBC), led by Alberta Innovates, to evaluate alternative, non-combustion uses for bitumen.

In addition, Canadian Natural provided industrial samples to the Carbon Fibre Grand Challenge, a $15 million competition designed to accelerate the development of carbon fibre from bitumen-derived asphaltenes. Products like these have the potential to be a game-changer with many different applications.

For more information on Canadian Natural's technology and innovation opportunities, read our 2022 Technology and Innovation Case Studies booklet.

Harnessing Renewable Energy Sources

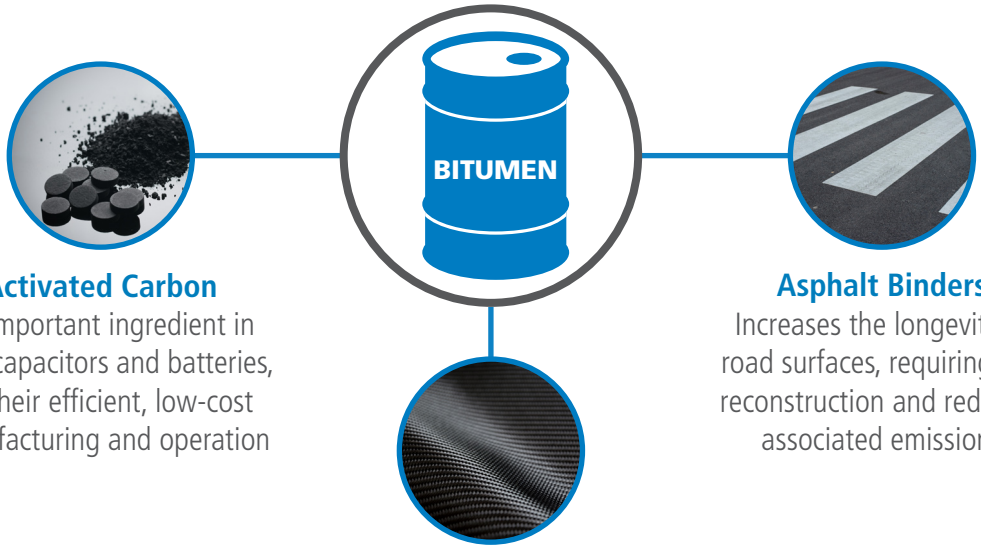
At our Septimus and Noel natural gas processing plants in British Columbia, we have invested in power infrastructure to use hydroelectricity as a power source to drive electric compressor motors instead of using natural gas.

Septimus has avoided over 700,000 t CO_2e since 2011 when it started operating, while the Noel plant has avoided ~124,000 t CO_2e since 2014. We continue to explore further opportunities to leverage hydroelectrical power.

Canadian Natural is also evaluating opportunities to add solar and wind power generators to supplement the electrical needs of our existing and new facilities.

In 2022, Canadian Natural launched a multi-year project to convert approximately 3,800 pneumatic injection pumps in our Alberta and British Columbia conventional areas to solar configurations. This project is targeting reductions of methane emissions by up to 361,000 t CO_2e/year when completed.

Bitumen Beyond Combustion Products Using Alberta's Bitumen



Activated Carbon
An important ingredient in supercapacitors and batteries, for their efficient, low-cost manufacturing and operation

Asphalt Binders
Increases the longevity of road surfaces, requiring less reconstruction and reducing associated emissions

Carbon Fibre
When blended with polymers makes lightweight, strong, and durable composite used in wind turbine blades and lightweight vehicles, railway cars, shipping containers and aircraft

Source: *Alberta Innovates*

Realizing Opportunities Through Partnerships

Canadian Natural is always reviewing and looking to develop new business opportunities and trends that present further opportunities to reduce our environmental footprint.

Supporting innovation and leveraging technology are key to reducing risk and advancing projects. Technology development takes time and capital to test and commercialize it, making collaboration essential when evaluating and leveraging research and development investments.

We work together with entrepreneurs, industry, academia, and technology companies, sharing knowledge and accelerating research and technology implementation to find innovative solutions to industry's environmental challenges.

Industry also works with government and regulators to develop policies and guidelines that enable continuous improvement and investment in environmental performance.

Our Partners

CRIN
Clean Resource Innovation Network
www.cleanresourceinnovation.com

Pathways Alliance
www.pathwaysalliance.ca

cosia
with Pathways Alliance
www.cosia.ca

PTAC
PETROLEUM TECHNOLOGY ALLIANCE CANADA
www.ptac.org

NGIF
NATURAL GAS INNOVATION FUND
GAZ NATUREL FINANCEMENT INNOVATION
www.ngif.ca

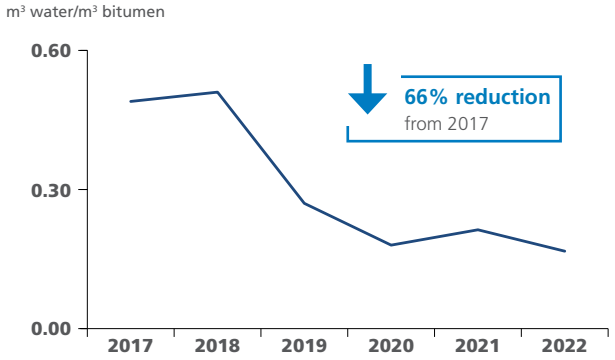
ptrc
www.ptrc.ca

Environment

Environmental Stewardship — A Fundamental Value

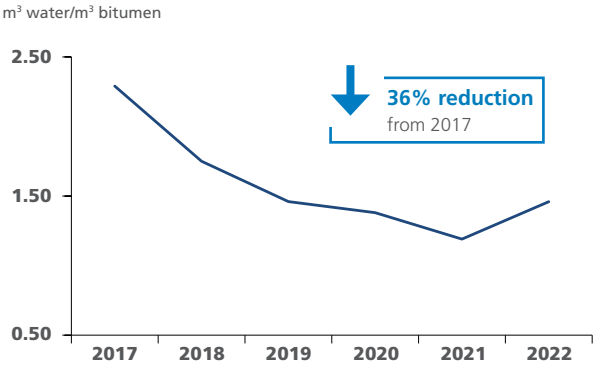
Environmental stewardship is a fundamental value of Canadian Natural. We recognize that every employee, contractor and supplier has a vital role to play in identifying, minimizing and mitigating environmental impacts from our operations to enhance environmental performance.

In Situ Fresh Water Use Intensity



Includes Alberta thermal in situ facilities. In situ fresh water use intensity has decreased from 2021 due to increased use of treated process water and saline water sources in operations.

Oil Sands Mining River Water Use Intensity



Includes river water and tributaries. Fresh river water use intensity increased from 2021 to 2022 due to temporary operational constraints that reduced the water availability from the Horizon tailings pond for reuse in our operations and led to higher river water withdrawals. Constraints were resolved in 2022 and we are targeting improved intensity for 2023.

Performance Highlights

8.6 million trees planted across our operations to date

3,121 inactive wells abandoned in 2022, a company record

12,641 hectares reclaimed in NA E&P since 2016

2,074 hectares reclaimed in oil sands mining to date

1,057 reclamation certificates submitted in NA E&P in 2022; equivalent to ~1,444 Canadian football fields

2023 goal of >1,200 reclamation certificates per year

2026 Targets:

40% reduction in in situ fresh water use intensity from 2017 baseline[1]

40% reduction in oil sands mining fresh river water use intensity from 2017 baseline[2]

1. *Includes Alberta thermal in situ facilities.*
2. *Includes river water and tributaries.*

Integrated Environmental Stewardship

Our Environmental Management System (EMS) is the foundation of our integrated environmental stewardship. Our EMS provides the structure to identify and assess environmental risks and minimize impacts in all phases of our projects, from planning through to design, operation and final reclamation.

We identify opportunities for improvement through regular environmental inspections, audits and monitoring, developing action plans and setting key indicators to measure performance across our operations. For example, we continue to enhance our wetland and wildlife monitoring programs by standardizing procedures and reporting to align with provincial programs.

Our International operations have an integrated Safety, Health and Environmental Management System (SHEMS) based on the same principles as our Canadian operations. To ensure asset integrity and marine environment protection, the system is structured to meet stringent operating standards and local regulatory requirements.

Continuous Improvement in Reclamation: Industrial Research Chair

In the oil sands region, wetlands provide habitat for multiple species at risk and are highly valued by local Indigenous peoples.

As part of our commitment to environmental management, Canadian Natural is investing in a program to help evaluate the success of our wetlands reclamation work and guide adaptive management.

The Industrial Research Chair in Oil Sands Wetland Reclamation program is developing ways to evaluate the success of newly created and developing wetlands. The key performance indicators are based on biological indicators, habitat structure and water quality in the oil sands mining region.

The program is supported by Canadian Natural, Natural Sciences and Engineering Research Council of Canada (NSERC), Canada's Oil Sands Innovation Alliance, oil sands mining industry partners, and the University of Calgary.

Wellhead in Saskatchewan.

Land Management with a Vision

We begin every project with a vision and plan to manage our impact on the land.

Across our operations, land management practices are designed to reduce disturbance and progressively reclaim land. In our conventional and thermal operations, we have been using an area-based approach to strategically reclaim large contiguous areas in the most cost-effective way.

Did you know?

Alberta's Environmental Protection and Enhancement Act requires operators to conserve and reclaim specified land and obtain a reclamation certificate.

These certificates are issued to operators when their site has been successfully reclaimed.

This program geographically groups well and pipeline abandonments, remediation and reclamation activities into projects. Project efficiencies are safely and strategically obtained through the coordination of people, equipment and technologies.

In oil sands mining operations, sites are subject to some of the strictest reclamation standards in the world. Reclaimed sites are monitored continuously for years afterwards to ensure a sustainable ecosystem is integrating successfully with the surrounding natural habitat.

12,641 hectares reclaimed in NA E&P since 2016

3,121 inactive wells abandoned in NA E&P in 2022, a company record

Reclaimed land at our Horizon operations.

Minimizing Environmental Footprint

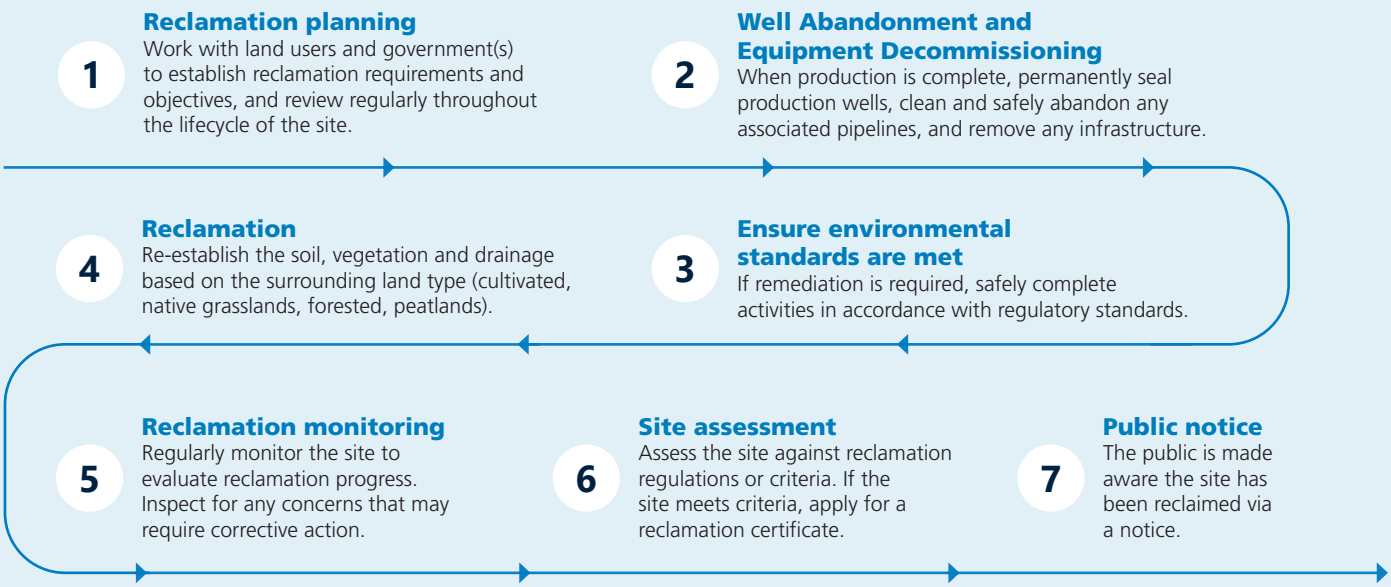
Within Canada, where the majority of our production is located, Canadian Natural develops project-specific mitigation frameworks to minimize impacts to high value conservation areas.

Based on the project's scale and location, mitigation frameworks potentially include species diversity, landscape level ecosystems, habitats, and cultural or traditional values. We work with local communities and industry to advance monitoring and research programs, incorporate traditional knowledge and improve reclamation practices.

Canadian Natural is an industry leader for abandonment, reclamation and facility decommissioning in Canada and offshore UK. We are continuously monitoring our impact and incorporate long-term biodiversity and reclamation planning into our programs to maintain regional characteristics and reduce impacts on wildlife.

Our mining operations have reclaimed 2,074 ha of upland forests, wetlands and shrubland to date. A rigorous process of mapping soils for salvage, storing the soil for replacement and monitoring revegetation of the reclaimed sites is in place to meet the planned outcomes.

Canadian Natural's Conventional/Thermal Operations Reclamation Process



4.4 million trees planted in our NA E&P operations to date

4.2 million trees planted at our oil sands mining operations since 2009

1.2 million trees planted across operations in 2022

Reclamation Planning for Ecological Outcomes

Canadian Natural is the operator of a 80 ha freshwater reservoir in Alberta, which was built in the 1970s and used for enhanced oil production.

Canadian Natural is working with Ducks Unlimited Canada to evaluate the feasibility of constructing a wetland ecosystem on the site. The planning process will consider whether the site can support a reclaimed wetland ecosystem including the sustainability of the water source, soil quality, and material for landform construction.

Work is underway to engage with the local municipality and the province to set reclamation objectives that include enhancing biodiversity and promotion of recreational activities.

In 2022, Canadian Natural began work with Ducks Unlimited Canada to evaluate the feasibility of constructing a wetland on a 80 ha reservoir.

Decommissioning

In the UK portion of the North Sea, decommissioning activities continued at Banff and Kyle fields in 2022. Plug and abandonment of nine developments was completed ahead of schedule, ensuring emissions and impacts to the environment were minimized.

The material that connects to the wellhead was recovered with 41% of the components re-used and 59% recycled. Decommissioning activities will continue for these fields over the next two years, with more materials targeted for reuse and recycle.

In 2022, our decommissioning activities at Ninian North were completed after the world's first removal of the platform using single-lift technology in 2021.

The single-lift technology significantly reduced the operations offshore, ensuring the protection of the marine environment. The platform structure was then processed at an onshore facility and achieved a recycling target of over 99%.

Ninian North Platform jacket being removed and transported by the Allseas Pioneering Spirit lift vessel.

Biodiversity and Wildlife

Canadian Natural assesses our impact from operations and incorporates long-term biodiversity and reclamation planning into our programs to maintain regional characteristics and reduce impacts on wildlife.

We apply a mitigation hierarchy to avoid, minimize, and restore habitat disturbances in project design, field operations, and closure.

Monitoring wildlife, biodiversity, aquatic ecosystems along with reclamation provides us with data to verify effectiveness and, where necessary, improve our mitigation programs. We continuously improve by conducting research and monitoring programs of reclamation practices.

The re-establishment of important soil functions and vegetation species is crucial to restoring habitat for wildlife, including species at risk, such as caribou. It is also important for restoring natural ecosystems, such as wetlands.

For example, Canadian Natural is a supporter of the Klinse-Za Caribou Maternal Penning project, led by the West Moberly and Saulteau First Nations in northeast British Columbia.

This project helps protect caribou calves and cows from predators until newborns are better equipped to protect themselves, helping reduce calf predation and recover populations.

Results show that calf survival beyond the first year is 46% higher within the pen than for members of the herd in the wild.

We are also working with the Alberta government and Indigenous stakeholders on design and implementation of the proposed Little Smoky Rearing Facility, located ~350 kilometres northwest of Edmonton.

Canadian Natural enters partnership for Conservation Agreement

In 2021, Canadian Natural established a Conservation Agreement with Environment and Climate Change Canada to conserve habitat for three federally listed bird Species-at-Risk: Common Nighthawk, Olive-sided Flycatcher and Canada Warbler.

The agreement designates 11,182 hectares (~112 km^2) in and around the Ells River Watershed next to our Horizon South operations as a protected area. Called the Ells River Interim Replacement Habitat, this area will help us understand these species through research and monitoring.

The monitoring program is focused on confirming the three birds' presence and understanding the types of forest areas each bird utilizes.

Monitoring is accomplished using Acoustic Recording Units, remote wildlife cameras, breeding bird surveys, and vegetation assessment plots. To date, 52 species of birds, seven species of bats, 17 species of mammals, and one amphibian species have been observed.

The Common Nighthawk at Canadian Natural's Ells River Interim Habitat.

Monitoring and Reducing Air Emissions

Canadian Natural measures and monitors air emissions from our larger sources and supports and participates in regional airsheds to monitor ambient air quality.

In the oil sands region, we are an active participant in the Wood Buffalo Environmental Association (WBEA), Lakeland Industry Community Association and the Peace River Air Monitoring Program, which are collaborations of communities, Indigenous peoples, environmental groups, industry, and government stakeholders.

All airshed management programs include monitoring air emissions based on human health guidelines. The WBEA network operates the most extensive ambient air monitoring network in Alberta inclusive of acid deposition to soils, lakes and vegetation, passive monitors, lichens, snow and odours.

This monitoring serves the Regional Municipality of Wood Buffalo with a complete picture of regional air quality, 24 hours/day, 365 days/year.

Site specific, real-time data collection gathered through direct sampling of stack emissions allows Canadian Natural to minimize SO_2 emissions at Horizon and Primrose/Wolf Lake operations and to optimize efficiency of processes.

At Horizon, an industry leading sulphur recovery system captures over 99.8% of the sulphur from the upgrading of bitumen.

Regionally, airshed monitoring programs assess the ambient air quality by also collecting real-time data and reporting their findings publicly.

Alberta's ambient air quality objectives and guidelines are developed under the *Alberta Environmental Protection and Enhancement Act (EPEA)*.

Land survey activity near Bonnyville, Alberta.

Water Management

Canadian Natural's water management strategies are focused on reducing fresh water use and improving water reuse. Our efforts focus on maximizing produced water recycling and using saline water for steam generation whenever possible.

Canadian crude oil and natural gas are produced under some of the highest environmental standards in the world, including strict water use regulations for fresh water withdrawals, wastewater disposal and hydraulic fracturing.

We engage with local communities on our water use and employ a comprehensive monitoring program that meets or exceeds regulatory requirements.

Continuous Improvement in Water Use

Canadian Natural measures water use in all operations, and monitors recycle efficiency rates, discharge amounts and water return from thermal injection and in bitumen processing.

Through enhanced treatment methods for process water and a focus on using saline sources, our thermal in situ operations continues to reduce fresh water use intensity.

In our oil sands mining operations, we continue to see an overall 36% reduction in river water use intensity from 2017. However, fresh river water use intensity increased from 2021 due to temporary operational constraints that reduced the water availability from the Horizon tailings pond for reuse in our operations. This led to higher river water withdrawals in 2022. The constraints have been resolved and we are now targeting improved fresh river water use intensity for 2023.

66% reduction in situ fresh water use intensity from 2017

83% recycle rate of produced water in in situ operations

36% reduction in oil sands mining river water use intensity from 2017

83% recycle rate of surface water in oil sands mining

Wāpan Sākahikan (Horizon Lake), fisheries compensation lake.

Collaborating to Improve Water Use

Canadian Natural works with other operators to share water allocations and infrastructure, which helps to conserve water while reducing costs. In collaboration with industry, we continue to improve water use through best practices, innovation and shared results.

For example, as part of our drilling practices, we follow the Hydraulic Fracturing Operating Practices that were developed by the Canadian Association of Petroleum Producers (CAPP) in support of a responsible approach to hydraulic fracturing and water management. For more information on our water management strategies, read our most recent CDP Water submission.

Water Act Licence Relinquished

In 2022, Canadian Natural voluntarily relinquished a *Water Act* licence for 22 million cubic metres of fresh water per year from the Athabasca River, representing 30% of Horizon's total water license.

Canadian Natural's ability to relinquish the licence is the result of integrating the Horizon South mineable area into the Horizon mine pit development, reducing the operation's overall environmental footprint.

Athabasca River.

Sunrise over Fickle Lake near our Edson, Alberta operations.

Tailings Management and Dam Safety

Canadian Natural's tailings management programs aim to reduce the size required for tailings ponds and expedite their reclamation certification.

Our comprehensive land use planning considers the end of mine life so that we can manage our environmental closure programs and obligations, and advance reclamation as efficiently as possible.

Canadian Natural's tailings management strategies focus on the objectives of dam integrity, environmental performance, and reclamation. We align with regulatory requirements based on two key principles:

1. Creating natural features on the land that are integrated within the local landscape; and
2. Supporting productive wetlands and boreal forest ecosystems.

We are also actively looking at eliminating tailings facilities in our new projects where possible. For example, in 2021 Canadian Natural obtained approval from the regulator to integrate Horizon South and Horizon into one mining project.

This approval allows the amalgamation of the Horizon South mineable area into the existing Horizon mine pit development.

The integrated approval avoids the need for a second external tailings facility (i.e. tailings pond) for Horizon South.

It also allows for progressive mining and backfilling of the extended pit with treated tailings, which avoids a future end pit lake that would have been required if Horizon South was mined separately.

Tailings Treatment and Reclamation

The continuous improvement of tailings management is an integral component of successful oil sands mining operations. Progressive annual reclamation activities are completed under some of the strictest reclamation standards in the world, including requirements for the decommissioning and closure of tailings facilities to ensure the stability and safety of the land.

Reducing the size and need for tailings ponds, and increasing the speed at which very fine particles settle, is important to our commitment to reclaim our tailings facilities as safely and quickly as possible.

Tailings Reclamation at Muskeg River

The South Expansion Area at our Muskeg River Mine, part of our Albian operations, was the first tailings facility in the oil sands mining region to be reclaimed to satisfy the new requirements under Alberta's Dam and Canal Safety Directive (2018).

The Directive requires a plan and authorization from the regulator for the decommissioning and closure of the facility that ensures the stability and safety of the landform.

Canadian Natural transformed the site to include natural landscape features such as hummocks and channels designed to reflect similar natural landforms in the region. A mixed forest was planted using trees and shrubs grown from seeds collected locally.

Active pond in July 2018.

Reclaimed area in August 2022.

Tailings Dam Safety

Canadian Natural is committed to responsibly managing tailings, ensuring dam integrity, and executing performance monitoring plans to ensure safe, reliable, effective, and efficient operations. We follow best practices, guidelines, and/or regulations from the:

- Canadian Dam Association
- Alberta Dam and Canal Safety Directive
- Alberta Environment and Protected Areas' Tailings Management Framework
- Alberta Energy Regulator’s Directive 085: Fluid Tailings Management for Oil Sands Mining Projects
- Mining Association of Canada's Towards Sustainable Mining standard

Our program is subject to multiple external audits, internal reviews and continuous monitoring. The design, construction and performance of the tailings facilities are reviewed twice annually by an independent review board of internationally recognized experts in tailings dam safety.

> “Over 80 individuals, representing about 14 stakeholder organizations, participated in the Joint Oil Sands Regional Emergency Preparedness orientation workshop and table-top exercise for our Horizon Oil Sands site. The exercise demonstrated the need and importance for response alignment in dam safety emergency situations.”
>
> **Walday Abeda**,
> *Manager – Geotechnical Engineering and Geology*

Additionally, a comprehensive operational safety review is performed every five years by an independent consulting firm with specialized technical expertise in dam safety.

All tailings facilities are engineered structures designed and operated with containment systems, managed daily by frontline operations and engineering staff, who are trained to maintain the integrity of the engineered facility design.

Emergency response plans are in place and tested annually to evaluate preparedness for a safe and well-coordinated response in the event of an incident with a tailings storage facility. Canadian Natural’s dam safety program has been audited by the Alberta Energy Regulator and is compliant in all aspects.

Read more about Canadian Natural's emergency response planning on page 47.

Did you know?

Tailings are generated as a result of the oil sands extraction process. They are composed of water, sands, silt, clay particles, minerals and residual bitumen as well as additives used to separate the bitumen.

These combined materials are deposited in tailings facilities where the majority of the solids, mostly sand, settle to the bottom. Clarified water from tailings facilities is recycled repeatedly to minimize fresh water usage for the extraction process.

We invest in tailings technologies to increase water recycling and improve tailings consolidation over time, to ultimately accelerate the reclamation process.

Tailings dam at our Horizon operations.

Environmental Monitoring for Tailings Management

Groundwater Monitoring

Extensive groundwater monitoring programs are in place surrounding our tailings storage facilities at our Albian and Horizon operations.

Our monitoring programs employ a suite of monitoring and operational measures. For example, at Jackpine Mine External Tailings Facility we have installed a robust network of shallow and deep groundwater monitoring wells and pumping wells. To date, Canadian Natural has not observed any adverse effects to the surrounding environment, including to the Athabasca River and its tributaries.

Wildlife Management

Albian and Horizon deploy state-of-the art bird deterrent systems around the tailings storage facilities related to avian migration starting in April and lasting to October once the ponds begin to freeze. Deterrent systems are designed to reduce bird contact with the tailings storage facilities and bird habituation.

As part of our continuous improvement plans, development work is underway to incorporate Artificial Intelligence (AI) that utilizes state-of-the-art optical sensors that detect both movement and heat signature of bird species to activate the appropriate mitigation.

Albian and Horizon have full-time teams of operational staff and contractors at each site to manage the systems and measures that include:

- bird detection system that activates on demand, reducing excessive noise
- marine radar system
- floating and land based deterrent platforms
- propane noise cannons and lasers

Both images above are examples of bird deterrent technology used at Canadian Natural.

Achieving a AAA Rating

In 2021, Canadian Natural's mining operations were audited under the Mining Association of Canada's Towards Sustainable Mining (TSM) program. Both Albian and Horizon operations received the highest rating of "AAA" for tailings management in 2020 and completed the external verification in 2021.

The audit highlighted the value of Canadian Natural's management systems to deliver tailings reduction programs to accelerate final reclamation. The TSM standard is a globally recognized sustainability program that supports mining companies in managing key environmental and social risks.

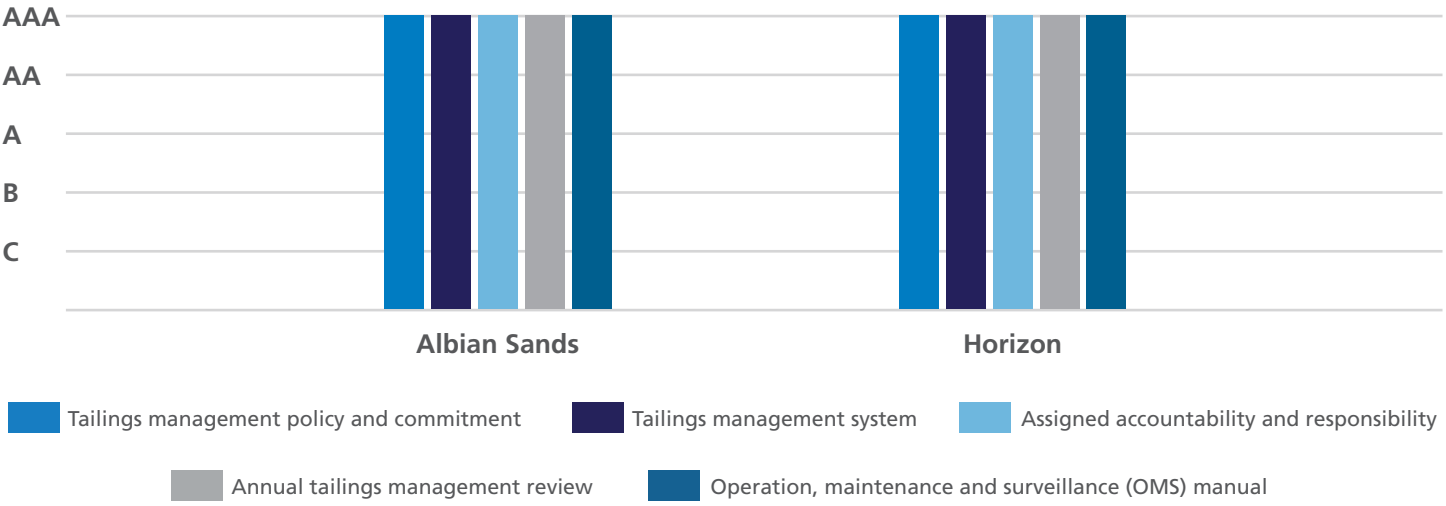
Visit the MAC website for our latest TSM audit report.

Investing in Research

Canadian Natural has invested ~$3.9 billion to date in tailings research, technologies and project construction since 2009. Our technologies are increasing water recycling and improving tailings consolidation over time, to ultimately accelerate the reclamation process. Read more about these technologies in our Technology Case Studies booklet.

Throughout tailings research, planning and execution efforts, Canadian Natural regularly engages with stakeholders, in particular neighbouring communities. Building on the foundation of our tailings management plan and our research, we strive to optimize resource recovery and reclaim the landscape.

Tailings Management Assessment



Investing in Technologies to Reduce Tailings Ponds

When we begin a project, we always have a vision and a proactive plan for the landscape that considers the end of mine life and tailings reclamation.

Our Non-Segregating Tailings process at Horizon uses cyclones to separate the coarse sand and thickeners to capture fines and remove water in the tailings stream prior to being sent to the tailings pond. CO_2 from Horizon's capture plant is injected in the tailings, further enhancing fines capture and accelerating dewatering.

At Albian, we use thickeners, centrifuges, and atmospheric fines drying to remove water from our fluid tailings.

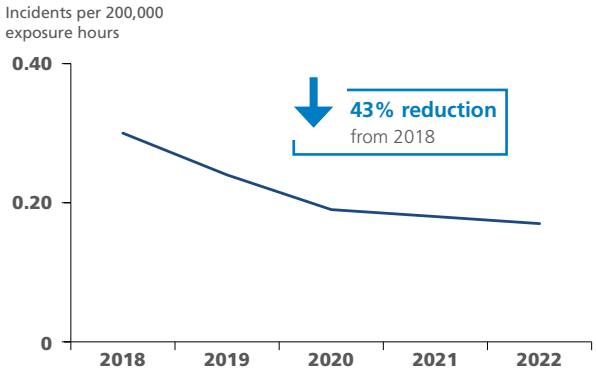
Horizon operations.

Workplace and Process Safety

Aiming for Safety Excellence

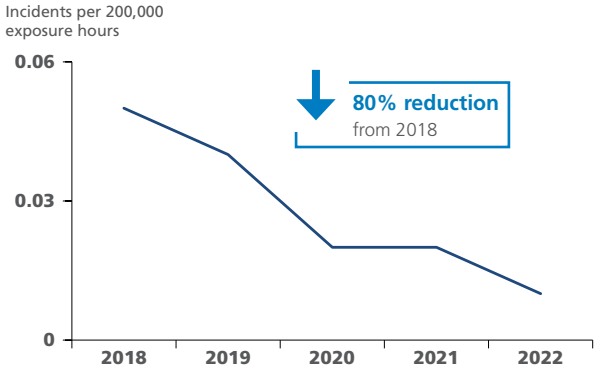
Canadian Natural is proud of our safety culture and our commitment to achieving Safety Excellence through continuous improvement. In 2022, our employees, contractors and service providers remained diligent in their focus on incident prevention, delivering safe, effective and efficient operations.

Corporate Total Recordable Injury Frequency (TRIF) (Employees and Contractors)[1]



1. *Revised to align with Energy Safety Canada's methodology.*

Corporate Lost Time Incident (LTI) Frequency (Employees and Contractors)[1]



1. *Revised to align with Energy Safety Canada's methodology.*

Performance Highlights

Workplace Safety

215,757 hours of safety and competency training completed in 2022

78,000 Worksite Safety Observations proactively identifying improvement opportunities

Process Safety

54% decrease in Tier 1 and Tier 2 process safety events from 2018

Zero geohazard pipeline leaks in 2022

At Canadian Natural, safety is a core value that underlies all our activities to reach our ultimate goal of 'No harm to people; No safety incidents'

A Foundational Safety Management System (SMS)

Safety Excellence across our operations is a shared goal throughout our company, our contractors and our service providers.

The cornerstone of our commitment to safety is ensuring employees and contractors at all levels are trained and engaged in our robust Safety Management System (SMS).

Our comprehensive SMS applies to every employee and contractor across our operations. Routine inspections and audits, as well as compliance and safety meetings, integrate personal health and safety, process safety and asset integrity.

Risk assessment tools built into our SMS allow us to identify potential hazards and effectively implement controls to prevent and reduce exposure to risks in the workplace.

Hazard identification, near-miss reporting, incident investigations, emergency response training, and management actions are all cornerstones of this program.

Each aspect of the SMS is audited regularly to ensure opportunities for continuous improvement are leveraged and employees and contractors are fluent in the system.

Field employees and contractors are required to complete the Site Supervisor Safety Training (SSST) as part of onboarding. The SSST covers regulatory compliance, explains our SMS, and explains site supervisor responsibilities. Workers also complete specific safety orientations.

As part of our Safety Orientation and Competency Training, workers are provided the safety information they need for their roles and responsibilities, including their expected performance and required procedural knowledge.

Management is involved in ensuring requirements are customized, while reporting tools are utilized to measure completion and compliance.

Workers at our Horizon operations.

Frontline-driven Incident Prevention

At Canadian Natural, safety is frontline-driven. This means that management and supervisors work together with field workers and reinforce everyone's role in contributing to a safe workplace. The direct involvement of our frontline staff is as important as management commitment.

Employees, contractors and service providers deliver valuable insights about how they can perform their jobs safely and efficiently.

Our safety teams work with leadership, employees and contractors to identify hazards and develop safe work procedures to achieve an incident-free workplace.

> "Canadian Natural has a frontline-driven safety culture, where everyone contributes to making the workplace safer. Our teams are working hard to improve our safety year-over-year, demonstrating our commitment to continuous improvement."
>
> **Tim McKay,**
> *President*

In 2022, our teams continued to work hard to further improve our culture of preventing incidents through specific initiatives designed to target areas for improvement:

- **Cross-divisional Working Group** – This working group includes representation from frontline employees and management across our operations. They work to identify improvement opportunities to enhance our safety performance to prevent incidents.

  Our 2021 review found no significant gaps in our management system; however, we found an opportunity to share best practices and ensure consistency in the implementation of our management system across the company. Key learnings and shared practices were applied across the organization in 2022.

- **Contractor Safety Excellence Meetings** – Canadian Natural works together with our contractors to ensure safe, effective and efficient operations. Contractor Safety Excellence Meetings have proved to be a successful tool in elevating safety performance.

  These meetings are designed to facilitate ongoing communication, review contractor safety performance, and align safety culture and expectations. In our Conventional/ Thermal operations alone, the companies that participated experienced a 90% reduction in recordable injuries.

Employees attend a safety meeting workshop at our Edson, Alberta operations.

Emergency Response Planning

Canadian Natural has a comprehensive approach to emergency management that extends throughout our operations to ensure we are properly prepared to protect personnel, the public, the environment and our assets in the event of an incident.

Our approach to emergency response management includes an Incident Command System, detailed procedures, trained personnel, and emergency response plans (ERPs) for immediate response with equipment access for safe, well-coordinated action.

Our programs and ERPs meet or exceed the regulatory requirements in each jurisdiction where we operate. We conduct regular planned training exercises at all of our operating sites to help ensure our employees are ready to respond should an incident occur.

These exercises test the fitness of emergency preparedness and response arrangements, and highlight areas of good practice and opportunities for improvements. Tabletop and major ERP exercises are also conducted with regulators and contractors.

In 2022, our emergency response exercises included topics such as the unlikely event of a tailings dam incident, forest fires and operational upsets.

Regulators, municipalities and internal and external stakeholders noted Canadian Natural's strong procedures and ability to respond to the simulated emergency events and meet the key objectives of protecting workers, the public and the environment.

Emergency responder performing a training excercise.

451 emergency response exercises were successfully completed across the company in 2022

Some of our emergency service vehicles at our Horizon and Albian operations.

Emergency Response in Action

In addition to exercises held within our company, all oil sands mining operators in Alberta using dams of a certain classification are required by the Alberta Energy Regulator (AER) to conduct an annual orientation workshop and tabletop/functional exercise.

In 2020 and 2021, Canadian Natural participated in the Joint Oil Sands Regional Emergency Preparedness orientation workshop and table-top exercise for our Horizon operations.

The joint workshop and emergency exercise in 2021 involved peer company representatives and representatives from regional stakeholders including numerous Indigenous communities, Alberta Energy Regulator, Alberta Dam Safety, Alberta Transportation Fort McMurray, Regional Municipality of Wood Buffalo (RMWB), and RCMP.

Over 80 individuals participated to promote awareness of potential dam related emergencies, review response communication protocols, and to understand roles and responsibilities of operators and affected stakeholders in the unlikely event of a dam safety emergency. Canadian Natural is scheduled to host again in 2024 — this time at our Albian Sands site.

Materials used in orientation workshops.

Investing in Community Emergency Response: STARS

Canadian Natural has supported the Shock Trauma Air Rescue Society (STARS) air ambulance service for the last three decades, helping to improve emergency response in Western Canada. In addition to our corporate support of over $3.8 million to date, in 2022, Jay Froc, Senior Vice-President Oil Sands Mining and Upgrading, participated in STARS 'Rescue on the River'.

Jay was flown to a remote location to take part in challenges before eventually earning his "rescue". Between many generous donations from Canadian Natural employees and contributions from his network, Jay was able to raise more than $128,000.

Our 30+ years of partnership with STARS has helped to improve access to leading-edge care for rural and remote communities. With STARS operations in many of the same areas and communities, there has been a direct benefit for Canadian Natural and for the health and safety of our frontline field staff.

> "Safety is a core value of both STARS and Canadian Natural, and we operate in many of the same areas across Western Canada. This benefits our frontline field staff as well as people that live in the community."
>
> **Jay Froc,**
> *Senior Vice-President, Oil Sands Mining and Upgrading*

Jay Froc stands beside a STARS helicopter.

Focused on Process Safety Performance

The integrity of our process equipment and structures is an essential part of ensuring the safety, compliance and reliability of our infrastructure company-wide. Our established, robust Process Safety Management (PSM) system is designed to prevent and control serious incidents that have the potential to release hazardous materials.

We continually improve our processes and performance through process safety metric tracking, training and monitoring. As a result of this focus and our teams working together, our PSM program has resulted in a 35% reduction in our Tier 1 and 2 process safety events in 2022 over 2021 levels.

An employee at a field site in Fort St. John, British Columbia.

Here are a few key ways we ensure our PSM is making a difference throughout the company:

- **Well established PSM processes** — For example, in our oil sands mining operations, our mature PSM processes include the tracking of process safety events. These events are then discussed at a PSM Review Panel of senior technical specialists and senior leadership, providing corporate-level process safety oversight to strategically implement improvements and further strengthen our process safety culture.
- **Culture of continuous improvement** — Our PSM performance is monitored by using recognized industry metrics to drive continuous improvement. In 2022, we enhanced our process hazard awareness training.

  The program is focused on teams working together to educate frontline staff on process safety related hazards. Groups use past incident lessons learned, potential hazards found in the field, and information and data from the Centre for Chemical Process Safety to drive improvement. Over 2,000 employees and contractors completed the training, leading to enhanced frontline engagement, increased awareness and reduced incidents.
- **Proactive risk management** — Canadian Natural employs a comprehensive GeoHazard Management System to monitor locations where streams, rivers or slope movement could impact pipeline integrity.

  In 2022, in our conventional and thermal operations, we enhanced our geohazard program with a focused approach on using data from past incidents to anticipate potential failures. The teams achieved zero geohazard-related pipeline events in 2022, and prevented nine potential failures due to proactive actions as part of the program.

Leak Prevention Through Asset Integrity Management

Our Asset Integrity Management Systems are another foundational pillar of our PSM system and provide the framework to identify, assess and manage risk to prevent leaks due to corrosion or other types of material degradation.

We use this system to coordinate compliance with regulations and drive continuous improvement through goal setting, tracking and results measurement. Asset Integrity, Operations, Engineering, and Safety teams receive training and support so that risks are proactively assessed, understood, communicated and mitigated.

For example, in 2022, the Asset Integrity Team at the Horizon Oil Sands facility completed a continuous improvement project to enhance our robust and detailed Risk Based Inspection system accredited by the Alberta Boilers Safety Association.

The project enhanced our continuous improvement program that provided site-wide awareness for workers engaged in inspection, maintenance and operation of pressure equipment at the facility.

The program improved asset integrity processes and procedures, enhancing our cross-functional team approach to pressure equipment safety and reliability.

Cyber Security Management

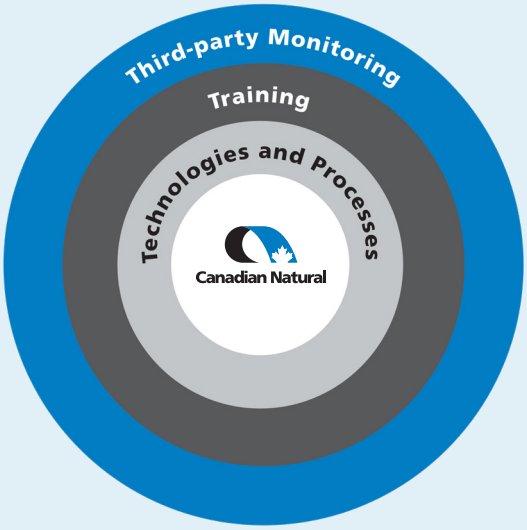
Canadian Natural takes a proactive approach to mitigating cyber security threats. We have robust processes in place to support our multi-layered technology that protect us from external threats. We continue to strengthen these protections across our corporate and operational systems.

We use third-party professional experts to monitor for anomalies every hour of every day. Our audits and our third party tests provide reassurance that our protective measures continue to enhance our cyber security.

To further augment our approach, we have a comprehensive training and awareness program that engages employees in identifying potential threats. Combined with a culture of continuous improvement, these robust measures help to mitigate our cyber security threats.

Canadian Natural's Cyber Security Approach

Layers of Protective Measures



70,992 cyber security training assignments completed
in 2022 with an average of 10 per employee

Workforce Health and Wellness

The proactive management of workforce health and wellness is a key part of Canadian Natural's strategy to help workers remain engaged and feel supported on the job.

Workplace health is managed throughout our operations, from our health and emergency response teams at our remote field locations to our ergonomic assessments in our corporate offices.

Our Strive wellness program, available across our operations, was established in 2012 and provides resources, tools and support for employees.

By participating in Strive either online or via the Strive app launched in 2021, employees are eligible for financial rewards for use toward additional healthcare or wellness expenses not fully covered by the company's benefits plan.

Employees are invited to complete Health Risk Assessments (HRA) to raise awareness of their potential health risks and recognize healthy habits. The data from the HRA and clinic results is used to help shape decisions around our benefits design to make the most impact.

Strive challenges, educational videos and regular emails help employees remain engaged and committed to their health throughout the year.

In 2022, Strive celebrated its 10-year anniversary of supporting employees in their wellness efforts. This milestone was marked with an increase in maximum value of healthcare and wellness dollars earned through program participation from $500 to $1,000.

Canadian Natural also participates in the Canadian Mental Health Association's program, Not Myself Today. Through the program, employee ambassadors in our Calgary office and field locations share valuable mental health support information throughout the year.

Not Myself Today is based on a shared insight — the feeling of not being oneself — that connects people to the topic of mental health and helps build empathy through in person check-ins, online resources and webinars. It is employee-driven with management's support, leading to an even bigger impact.

NOT myself TODAY®

Inkblot added to Canadian Natural's Mental Health Toolbox

In 2022, Canadian Natural expanded support for the mental health of our employees by launching a new benefit called Inkblot. Inkblot provides online video counselling services through a secure and encrypted platform.

Our employees can access a wide range of online services related to stress, anxiety, depression, relationship conflict, grief, trauma, and addiction.

Inkblot allows employees to connect with their preferred counsellor at a time and location that works best for them. The program leverages the coverage provided under Canadian Natural's Extended Health Care plan, so employees' dollars go further – helping more employees get the support they need.

Inkblot

People, Community and Partnerships

Canadian Natural is committed to working together with local communities and stakeholders to build long-lasting positive relationships based on mutual respect. Our teams focus on improving the way we do business to be more effective and efficient in support of a long-term, sustainable industry.

Meeting the needs of the communities we work in starts with supporting our workforce. With robust recruitment and retention activities, continuing our journey on diversity and inclusion and a commitment to ethics and integrity, our teams are building meaningful partnerships throughout the communities we operate in.

Our teams work hard to build and maintain positive relationships with all our stakeholders. Fundamental to this approach is our dedicated field-based staff, including stakeholder and community relations advisors, area landmen, and superintendents.

All activities are monitored, tracked and incorporated into our annual plans in support of strategic priorities identified in each operating area so that the communities where we operate also benefit from oil and natural gas development.

Performance Highlights

$684 million in contracts
a 20% increase from 2021, with 167 Indigenous businesses

>$30 million donated to United Way over 30+ years

$10 million invested
in employee and contractor training

800+ community activities
supported in 2022

135 scholarships & bursaries awarded across operations in 2022, totalling $230,592

United Way volunteers.

Stakeholder Engagement

Our engagement efforts focus on building and maintaining relationships throughout the project lifecycle. Relationships are built through meaningful discussions so community members are well positioned to openly share their concerns and ideas for improvement through our many interactions.

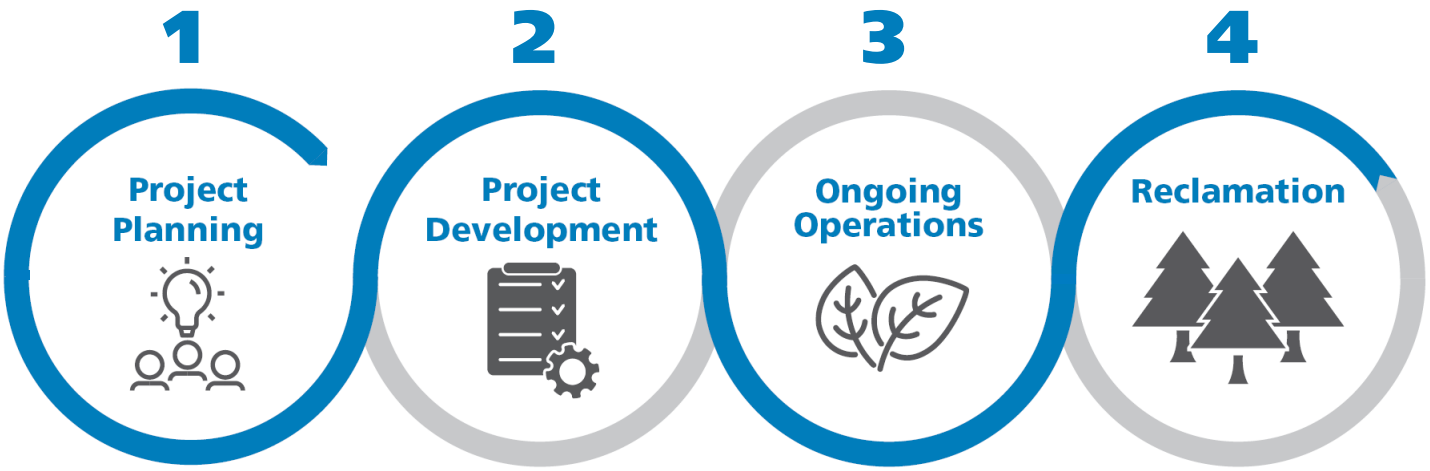
Part of our ongoing engagement with local communities is to look to the future. We regularly meet with local leadership to discuss our operations in the area and how our community investment efforts can support local needs, priorities and long-term sustainable jobs.

In our oil sands mining operations, we engage with stakeholders on our mine closure plans that are updated regularly to incorporate best practices, research results, and community and stakeholder input. We support comprehensive engagement with communities throughout the mining lifecycle.

In 2022, we continued to connect and work with many stakeholders on local area opportunities and challenges:

- Engaged with communities on more than 100 projects and development plans.
- Worked with local governments, rural counties and municipalities, chambers of commerce, landowners, regulators, industry and non-governmental groups to identify and address community concerns. These included engagement on:
  - Operational activities
  - Business opportunities
  - Environmental stewardship
  - Public safety
  - Services to improve quality of life
  - Appropriate property tax levels
  - Infrastructure and road use
- Participated in collective dialogues at local stakeholder and synergy groups.

Stakeholder Engagement through the Project Lifecycle



1 Project Planning	2 Project Development	3 Ongoing Operations	4 Reclamation
Engagement on areas of project placement considering ecologically sensitive species and habitat, traditional land use, cultural importance, construction feasibility, reservoir access, etc. as well as mitigation measure discussions	Facilitate opportunities to encourage local businesses for project development work	Ongoing monitoring and community engagement, with annual engagement plans to respond to community priorities and commitment tracking	Engagement to acknowledge traditional knowledge and involve local businesses in reclamation work

Engaging with Indigenous Communities

We engage with Indigenous communities from a place of respect for the traditional values and cultures of the many different communities where we do business.

Before a project begins, we consult with communities to explain the project and acquire information about traditional land use and culturally important areas.

To foster ongoing communication, we connect regularly with community leadership, Elders, members and advisory committees to identify and discuss community interests and concerns.

For example, in our oil sands mining operations, Canadian Natural organizes Annual Stakeholder Tailings Forums in Alberta with representatives from seven local Indigenous communities to share operational updates and discuss environmental programs.

Our engagement efforts are steered by our commitment to our Code of Conduct and Human Rights, guiding employees and contractors in maintaining the highest level of business ethics and principles.

In areas where we have extensive operations near communities, we have established working relationship agreements to formalize our engagement efforts with Indigenous communities. These agreements promote relationship building and mutual benefit through economic and community development opportunities.

Our responsibilities and commitments when working with Indigenous communities are outlined in our Indigenous Relations Policy available on our website.

Canadian Natural is also investing in local communities to help them develop skills for the future. For example, we are members of the Northern Opportunities Learning Council, which provides local opportunities for students to combine high school, college studies and work-based training to simultaneously earn a high school diploma, advanced credit in post-secondary and industry certification.

> "As a community member myself, I feel privileged to be able to work alongside the people and organizations in the communities around our operations. Supporting each other is essential to making a positive difference."
>
> **Kim Foisy,**
> *Stakeholder Relations Advisor, Thermal/Heavy Oil*

$684 million in contracts
a 20% increase from 2021, with 167 Indigenous businesses

Members of Métis Local 125 and Fort McMurray Local 1935 on a tour of our oil sands mining facilities.

Promoting Local Business Development and Capacity Building

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 and economic development.

Canadian Natural's supply management process supports identification and consideration of appropriate Indigenous capacity for involvement in Request for Proposals (RFP)/bid processes.

We host business development meetings with community representatives to identify and provide shared value through opportunities for Indigenous-based businesses, as well as capacity building opportunities with Canadian Natural and our contractors.

For example, Canadian Natural works with local Indigenous-owned companies to build abandonment and reclamation project capacity.

Most recently, 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.

In 2021 and 2022, we invested approximately $81 million working with Indigenous companies on site closure projects supported by a federal government funding program. The program has built abandonment and reclamation capacity that will benefit these communities for years to come.

Building Community Capacity

Canadian Natural sponsored the Wellsite Abandonment & Reclamation Training Project, developed by the Indian Resource Council of Canada (IRC), to build capacity and ensure Indigenous workers were able to participate in the Alberta Site Rehabilitation Program. Safety training is another important component of this program, which aligns with safety as a core value.

This initiative included 36 First Nations and all Métis Settlements, and our involvement included participation on steering committees and training sessions. Canadian Natural's funding provided training for 416 Indigenous people that saw a 92% placement in careers and created over 30 new First Nations companies.

Between 2020 and 2022, Canadian Natural also completed well decommissioning and reclamation earthwork on 57 sites on or near the Onion Lake Cree Nation. We worked closely with the community to share decommissioning and reclamation plans including field visits by community Elders. The majority of the work was completed using community-owned businesses, developing the community's capacity for future reclamation and decommissioning opportunities.

Reclamation area on Onion Lake Cree Nation.

Canadian Natural invested $30.3 million in local communities in 2022

Investing in Communities

As members of the communities where we operate, our teams work closely with stakeholders to understand and prioritize development initiatives based on their needs now, and in the future.

In this way, we can help local grassroots efforts gain traction and direct resources towards meaningful, lasting programs and initiatives that will benefit communities for years to come.

Canadian Natural and its employees take great pride in 'doing it right' and making a positive, long-term impact in the communities near our operations.

Our Community Investment Program puts strategies and action plans in place that allow us to support priority needs identified by stakeholders.

In addition to funding provided through our Community Investment Program, employee giving is another important way in which we make a difference in the lives of people in need within the communities near our operations.

Our staff is highly engaged in numerous fundraising activities and volunteer opportunities each year. In many cases the company matches what employees raise to double our level of support for worthwhile causes.

Investments and Sponsorships Include:

Health & Wellness

- Alberta Adolescent Recovery Centre (AARC)
- APPLE Schools
- Fresh Start Recovery Centre
- STARS Foundation

Education & Training

- CAREERS The Next Generation
- Skills Canada Alberta
- Keyano College Foundation
- Wood Buffalo Regional Science Fair

Community & Social Wellbeing

- Canadian Red Cross – Ukraine Humanitarian Aid
- Alberta Children's Cottage Society
- Grande Prairie Regional Hospital
- Lac La Biche Health Foundation

Indigenous Community Investment

- Horse Lake First Nation – Clear Hills Youth Treatment Centre
- Saulteau First Nation – Pemmican Day
- Mikisew Cree First Nation – Cultural Retreat
- Sucker Creek First Nation – Women's Emergency Shelter

Supporting the Canadian Military

Canadian Natural operates assets on the Cold Lake weapons range and works with the military and federal government to ensure military activities and operations near the base co-exist positively. As part of this partnership, we proudly support our Canadian military members and their families through the 4 Wing Military Family Resource Centre Society (MFRCS).

We sponsor key events and initiatives here at home like deployment and holiday dinners, the Comfort Quilt Program (part of the MFRCS Lakeland Cancer Support Group project), Cold Lake Air Show, and working with the military to send care packages to troops deployed overseas. Our employees take pride in helping to boost morale and show the respect and admiration we have for the work the Canadian Armed Forces does every day.

> "The morale packages make a big difference in the lives of our deployed members. I'm grateful for the amazing relationship we've built with the Canadian Natural team — the MFCRS couldn't make the positive impact it does without that partnership and support."
>
> **Judith Chance,**
> *Fund Development Manager, MFRCS*

Record-breaking United Way Campaign

In 2022, employees raised $1.4 million for charitable organizations, which includes our record-breaking total donations in the annual United Way campaign.

Canadian Natural has been partnering with United Way to create positive change since 1988, in both the Municipality of Wood Buffalo (near our oil sands mining operations) and in the Calgary area.

Canadian Natural wins Workplace Excellence Award

In 2022, Canadian Natural took home the United Way Workplace Excellence Award for surpassing all of our past achievement records in employee giving, corporate giving and special events.

The campaign included many in-person events to raise money and help build comradery among employees across the business.

These events included:

- A special employee kick-off event
- A speaker series featuring an information session on Truth and Reconciliation in Canada
- Talks by agencies offering support to people in need
- A peer-to-peer candy gram appreciation event

Congratulations on a job well done!

> "Our 2022 campaign theme was 'Together doing it right, we make the biggest difference.' Working together, we have been supporting United Way for three decades. During that time, we have raised over $30 million from employee giving and company matching. We are very pleased with what we've been able to do together."
>
> **Scott Stauth,**
> *Chief Operating Officer, Oil Sands*

$2.2 million donated to United Way through employee giving and corporate matching in 2022

$1.4 million donated by employees to charitable organizations in 2022

1,047 units of blood donated to Canadian Blood Services. Received 2022 Award for most new donors

Our United Way co-chairs accepting the Workplace Excellence Award.

Ethics and Integrity

Canadian Natural is committed to maintaining the highest level of business ethics and principles. To ensure all employees know and understand what is expected of them in the performance of their duties, the company has in place a Code of Integrity, Business Ethics and Conduct (the "Code").

All directors, officers, employees (permanent and part-time), contractors, and consultants are required to acknowledge and sign the Code when joining the company and to review it annually.

Our employees are also required to apply the Code to sustainability matters, specifically in working with regulatory bodies, sustainability reporting, and third-party industry associations. Each year, a detailed anti-fraud, bribery and corruption assessment is submitted to Canadian Natural's Management Committee.

In 2023, Canadian Natural is rolling out a computer-based training program on the Code for all employees. The training will be required annually, and all employees and contractors will verify that they are in compliance with the Code at the end of the training. Our full Code is available on our website.

ConfidenceLine: Canadian Natural's Integrity Hotline

ConfidenceLine, our third-party managed integrity hotline, is one of the ways community members, employees, contractors, and service providers are able to share concerns. These could include confidential and anonymous concerns such as workplace matters, financial integrity, and business relationships.

The hotline also ensures that if incidents of discrimination arise, they are addressed with corrective actions. ConfidenceLine is available by phone or via the website 24 hours a day, 365 days a year.

Stakeholder Feedback Mechanisms

- **Company contacts** — Field-based employees connect with stakeholders through direct contact, community events and community forums. These connections offer community members the opportunity to share their questions and concerns directly with our team.
- **ConfidenceLine** — Our third-party managed hotline is available to stakeholders, including employees and contractors, to share their questions and concerns anonymously.

24/7

Canadian Natural reinforces our commitment to integrity and ethics by offering ConfidenceLine, an anonymous hotline available seven days a week, 24 hours a day.

Workers at our Horizon operations.

Diversity & Inclusion

Canadian Natural's diverse culture and continued focus on inclusive, collaborative, and innovative work environments helps contribute to a positive mindset and sense of belonging for employees.

Our leadership is committed to building creative and resilient teams through an atmosphere where everyone can contribute to the success of the company. Supporting women in our communities and workplaces is a key part of this work.

>$30 thousand invested into local women's emergency shelters across our operating areas

421 women in supervisory and technical roles

33.3% female Independent Directors of the Board

19% female Managers, including Senior Management

We strive to ensure all employees have equal access to resources, development opportunities, and feel supported in efforts that increase collaboration, engagement, and empowerment.

The foundation of this commitment is outlined in the following documents and applies to all employees, contractors, Board of Directors and suppliers:

- Code of Integrity, Business Ethics and Conduct
- Diversity Policy Statement
- Workplace Harassment and Violence Prevention Policy
- Parental Leave Policy
- Respect in the Workplace Training Program
- Strive Employee Wellness Program

Canadian Natural's leadership continues to build on diversity and inclusion to ensure our efforts reflect our mission statement and core values by supporting people and teams, attracting top talent and driving innovation.

Employees recognize the National Day for Truth and Reconciliation

Canadian Natural supports the National Day For Truth and Reconciliation and is committed to conducting our activities in a manner that respects the rights, interests and cultures of Indigenous peoples and communities.

As part of our 2022 United Way events, we hosted an Indigenous education and awareness session for employees on Orange Shirt Day in September 2022.

The Orange Shirt Day events were designed to commemorate the residential school experience, to witness and honour the healing journey of the survivors and their families, and to commit to the ongoing process of reconciliation.

Canadian Natural employees wearing orange shirts in support of National Day for Truth and Reconciliation.

Talent Attraction, Training & Development

Canadian Natural is an equal opportunity employer that offers a safe and inclusive work environment. All employees have equal access to continuing education and career development opportunities, and we work to develop local talent. We also develop people through internal training and mentorship initiatives.

Talent Retention

Employee engagement and mentorship initiatives include our Gen Next young professional network, E3 (engage, educate, empower) focusing on enhancing and creating opportunities for interaction, collaboration and knowledge sharing, and the Equality, Diversity and Inclusion (EDI) program in our International operations that promotes an inclusive culture based on mutual respect.

Much like our approach to safety in our operations, Canadian Natural encourages our employees to regularly upgrade their skills, achieve and maintain their certifications and professionally develop.

For example, we support employees with their professional designations by providing the time and resources to complete their professional development hours that help them meet their designation requirements.

Leadership training, conflict resolution training and skills development are also available, with coordination and support provided by our Human Resources team.

We offer online and in-person courses in technical, leadership and organizational skills that build on our employees' strengths.

Commercial Operations New Grad Program a Success

In 2022, the first cohort of seven new grads (see photo on right) completed Canadian Natural's Commercial Operations New Graduate Program.

Each new grad accomplished 37 rotations, reported to more than 10 managers, engaged with over 20 leads and created a fun, new grad support network that welcomes and supports new team members.

Employees in Grande Prairie volunteering in the community.

Talent Recruitment

Canadian Natural's recruitment process is consistent with our commitment to human rights as detailed in our Code of Integrity, Business Ethics and Conduct.

Our recruitment process considers equality, diversity and inclusion. When identifying candidates, for permanent and contractor roles, we take into account experience, qualifications, expertise, skills and knowledge.

Our Campus Recruitment program is one of the largest in the country. We seek diverse candidates from a variety of academic institutions across the country.

Our program is designed with the students in mind and allows them to be part of the team from day one, gaining experience and knowledge, and receiving training and mentorship under the guidance of skilled staff. Many of our students are hired for permanent positions upon graduation.

We also facilitate training programs and work together with communities and the education system to identify and develop local talent.

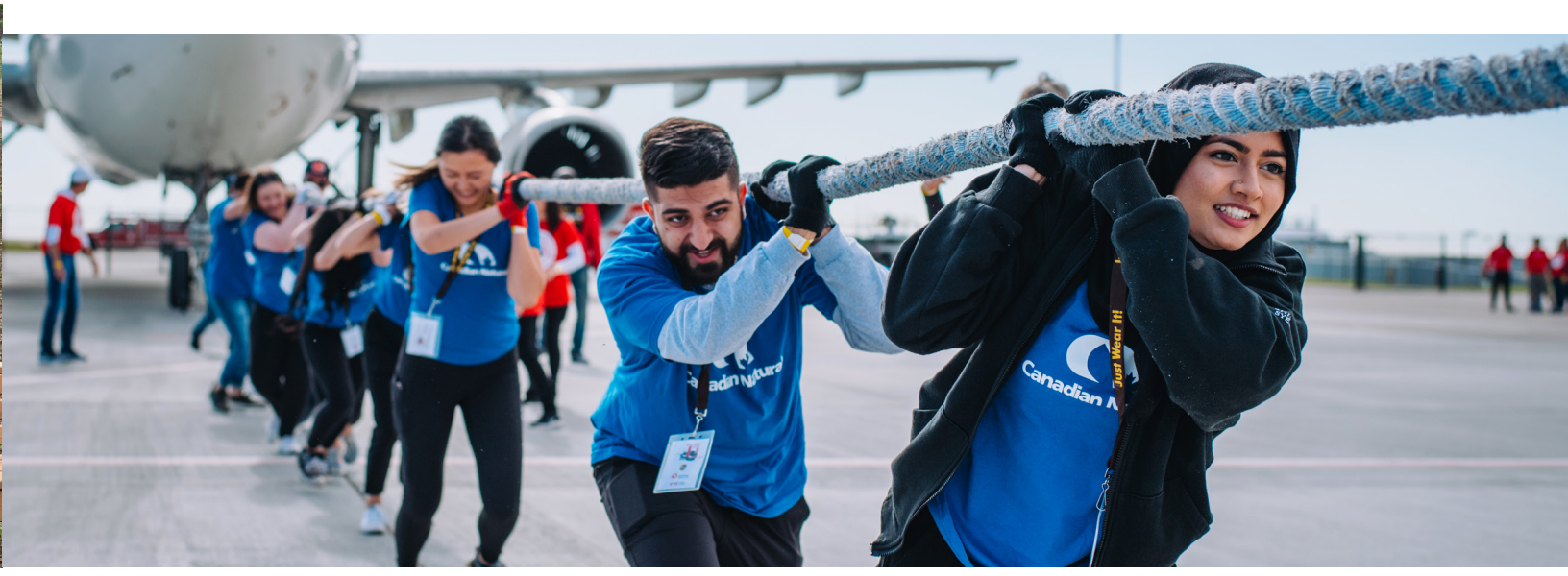
Once hired, we offer mentorships, apprenticeships, cross-company placements and cooperative student opportunities — all in service of promoting internal talent to fill positions. For example, our Engineer-in-Training (EIT) program provides mentorship with senior engineers and hands-on experience.

We also continue to offer scholarship opportunities in Canada, the UK and Côte d'Ivoire, including the Canadian Natural Building Futures Scholarship program for post-secondary studies.

> "Receiving this scholarship has allowed me to finish my winter semester strongly by focusing more on my studies and volunteering within my community, rather than having to be at work. I am very grateful to have received this award and I cannot thank the company enough for supporting my educational journey."
>
> **Destiny Strong** *of the Athabasca Chipewyan First Nation (ACFN), recipient of a 2022 Canadian Natural Building Futures Scholarship*

474 students hired for summer/cooperative work terms

Canadian Natural awarded scholarships and bursaries to 135 students in 2022, including 31 of Indigenous descent, for a total of $230,592



Canadian Natural students compete in a plane-pull contest as part of our United Way campaign.

Performance Data

The company's performance data is based on the operational control approach and reflect operations acquired by the company and new capital projects started during the periods presented in this report. From Q2 2019 onward, NA E&P operations include Kirby North, Jackfish and additional primary heavy oil assets. Where adjustments of historical data have occurred, explanatory footnotes are provided.

PRODUCTION

Gross operated production values are used for reporting intensity metrics unless otherwise noted. Production values are presented here for the purposes of calculating greenhouse gas (GHG) and spill intensities represent the company's gross operated production before royalties. These values are not reflected within our financial reports, which represents the company's working interest share of production, before royalties (BOE = barrel of oil equivalent).

Gross operated production, before royalties (MMboe)	2018	2019	2020	2021	2022
North America Exploration and Production	249.7	262.8	285.1	299.0	325.5
Oil Sands Mining and Upgrading	185.2	173.0	180.6	197.7	187.1
International Exploration and Production	26.1	28.2	21.4	16.2	15.2
CORPORATE TOTAL	**461.4**	**464.4**	**487.1**	**513.0**	**527.8**

EMPLOYMENT

Number of employees[1]	2018	2019	2020	2021	2022
North America Exploration and Production	4,395	4,857	4,736	4,603	4,975
Oil Sands Mining and Upgrading	4,948	4,979	4,918	4,807	4,751
International Exploration and Production	366	344	339	325	309
CORPORATE TOTAL	**9,709**	**10,180**	**9,993**	**9,735**	**10,035**

1. *Active full-time equivalent permanent employees.*

Exposure hours (millions) — based on a 12-hour shift	2018	2019	2020	2021	2022
North America Exploration and Production	44.71	42.88	38.10	46.53	59.25
Oil Sands Mining and Upgrading[1]	53.87	54.14	50.26	56.84	65.02
International Exploration and Production	4.98	5.22	3.59	3.15	3.78
CORPORATE TOTAL	**103.56**	**102.24**	**91.95**	**106.52**	**128.05**

1. *Exposure hours for oil sands mining from 2018-2021 revised to align with Energy Safety Canada.*

ECONOMIC CONTRIBUTIONS

Contributions to economies ($ millions)	2018	2019	2020	2021	2022
Community investment	15	25	25	31	30
Contracts with Indigenous businesses and services	500	550	490	572	684
Payments to suppliers	8,275	8,090	6,832	6,829	9,011

SAFETY

Recordable injury frequency (TRIF) (employees and contractors) per 200,000 hours worked	2018	2019	2020	2021	2022
North America Exploration and Production	0.34	0.22	0.20	0.19	0.19
Oil Sands Mining and Upgrading[1]	0.22	0.22	0.18	0.15	0.14
International Exploration and Production	0.72	0.61	0.22	0.57	0.37
CORPORATE TOTAL	**0.30**	**0.24**	**0.19**	**0.18**	**0.17**

1. *Exposure hours for oil sands mining from 2018-2021 revised to align with Energy Safety Canada.*

Lost time incident frequency (LTI)[1] (employees and contractors) per 200,000 exposure hours	2018	2019	2020	2021	2022
CORPORATE TOTAL[2]	**0.05**	**0.04**	**0.02**	**0.02**	**0.01**

1. *LTI is an injury incident where a worker is unable to return to work the next scheduled day.*
2. *Exposure hours for oil sands mining from 2018-2021 revised to align with Energy Safety Canada.*

Fatalities - Employees	2018	2019	2020	2021	2022
North America Exploration and Production	0	0	0	0	0
Oil Sands Mining and Upgrading	0	0	0	0	0
International Exploration and Production	0	0	0	0	0
CORPORATE TOTAL	**0**	**0**	**0**	**0**	**0**

Fatalities - Contractors	2018	2019	2020	2021	2022
North America Exploration and Production	0	0	2	0	0
Oil Sands Mining and Upgrading	0	0	0	0	0
International Exploration and Production	0	0	0	2	0
CORPORATE TOTAL	**0**	**0**	**2**	**2**	**0**

Regulatory inspections compliance (% satisfactory) North America Exploration and Production	2018	2019	2020	2021	2022
Alberta	84.5	83.6	89.1	83.2	83.3
British Columbia	73.0	79.2	82.4	83.1	80.1

PROCESS SAFETY MANAGEMENT (PSM) EVENTS

Corporate Tier 1 and Tier 2 process safety incidents are defined by the American Petroleum Institute Recommended Practice 754.

PSM events	2018	2019	2020	2021	2022
Operational Process Safety Events (Tier 1 and Tier 2)	120	111	84	85	55

Tier 1 events	2018	2019	2020	2021	2022
North America Exploration and Production	32	26	11	15	8
Oil Sands Mining and Upgrading	4	3	1	1	1
International Exploration and Production	1	0	0	0	0
TIER 1 TOTAL	**37**	**29**	**12**	**16**	**9**

Tier 2 events	2018	2019	2020	2021	2022
North America Exploration and Production	78	81	70	65	41
Oil Sands Mining and Upgrading	5	1	1	3	4
International Exploration and Production	0	0	1	1	1
TIER 2 TOTAL	**83**	**82**	**72**	**69**	**46**

GHG EMISSIONS

As part of Canadian Natural's commitment to sustainability reporting, we have engaged an independent third party to provide assurance on the reported GHG emissions. They have provided reasonable assurance for reported 2022 Scope 1 (which includes methane emissions) and Scope 2 emissions along with limited assurance for 2022 Scope 3 emissions. The independent assurance report is provided at the end of this report.

The company's Scope 1 and 2 GHG emissions are reported based on the operational control approach. Scope 3 emissions are reported on a net working interest basis after royalties and self-consumption of natural gas.

The company's GHG emission estimates are prepared following the GHG Protocol Corporate Accounting and Reporting Standard, Alberta Greenhouse Gas Quantification Methodologies (AQM) for individually regulated projects, Western Climate Initiative Essential Requirements for Mandatory Reporting and internal calculation guidance based on the AQM and supplemented with internal engineering estimates for methane emissions from unmetered sources.

Scope 1 GHG emissions include direct emissions from combustion, flaring, formation CO_2, venting and fugitive leaks from equipment. For a breakdown of our GHG emissions by greenhouse gas type (CO_2, CH_4, N_2O, HFC, PFC and SF_6) please see our CDP Climate Change questionnaire.

Scope 2 GHG emissions are indirect emissions that occur from the generation of purchased electricity and steam consumed by the company and that physically occur at the facility where electricity and/or steam is generated. Offshore platforms in the UK and offshore Africa do not purchase any electricity, therefore do not have associated Scope 2 emissions.

Scope 3 GHG emissions are 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 after royalties and self-consumption of natural gas, 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 Carbon Disclosure Project (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 or 2.

GHG emissions intensity – gross operated

Scope 1 GHG emissions intensity (tonnes CO_2e/BOE)	2018	2019	2020	2021	2022
North America Exploration and Production	0.052	0.052	0.054	0.051	0.046
Oil Sands Mining and Upgrading	0.040	0.040	0.039	0.036	0.039
International Exploration and Production	0.059	0.051	0.056	0.054	0.051
CORPORATE TOTAL	**0.048**	**0.048**	**0.049**	**0.045**	**0.044**

Scope 1&2 GHG emissions intensity (tonnes CO_2e/BOE)	2018	2019	2020	2021	2022
North America Exploration and Production	0.058	0.058	0.060	0.056	0.051
Oil Sands Mining and Upgrading	0.049	0.049	0.048	0.045	0.048
International Exploration and Production	0.059	0.051	0.056	0.054	0.051
CORPORATE TOTAL	**0.054**	**0.054**	**0.056**	**0.051**	**0.050**

Scope 1 direct GHG emissions

Absolute GHG emissions (million tonnes CO_2e)	2018	2019	2020	2021	2022
North America Exploration and Production	12.99	13.76	15.53	15.13	15.12
Oil Sands Mining and Upgrading	7.45	6.91	7.09	7.14	7.35
International Exploration and Production	1.53	1.45	1.19	0.88	0.78
CORPORATE TOTAL	**21.97**	**22.12**	**23.81**	**23.15**	**23.25**

Direct GHG emissions from fuel consumption (million tonnes CO_2e)	2018	2019	2020	2021	2022
North America Exploration and Production	9.40	10.48	12.69	12.95	12.53
Oil Sands Mining and Upgrading	4.35	4.21	4.39	4.43	4.19
International Exploration and Production	1.03	0.93	0.81	0.66	0.61
CORPORATE TOTAL	**14.78**	**15.62**	**17.89**	**18.04**	**17.33**

Methane emissions (million tonnes CO_2e)	2018	2019	2020	2021	2022
North America Exploration and Production	4.11	3.89	2.92	2.55	2.29

Volume natural gas flared (10^3m^3)	2018	2019	2020	2021	2022
North America Exploration and Production	96,209	97,742	110,067[1]	131,323	127,314
Oil Sands Mining and Upgrading[2]	20,422	14,357	19,319	20,032	14,305
International Exploration and Production	195,233	210,702	152,935	86,605	71,479
CORPORATE TOTAL	**311,864**	**322,801**	**282,321**	**238,160**	**213,098**

1. *Regulatory change in flare gas definition - fuel gas volumes that are used to assist the flare operation are reported as flared volumes as of January 1, 2020.*
2. *Flaring at oil sands mining and upgrading operations is associated with turnaround activity.*

Volume natural gas vented (10^3m^3)	2018	2019	2020	2021	2022
North America Exploration and Production	102,467	98,760	100,253	88,674	83,963

Scope 2 indirect GHG emissions					
North America Exploration and Production	**2018**	**2019**	**2020**	**2021**	**2022**
Electricity consumption (TWh)	2.79	2.85	2.90	2.87	2.94
Electricity consumption (TWh) from renewable sources	0.21	0.18	0.18	0.18	0.19
Scope 2 GHG emissions (million tonnes CO_2e)	**1.47**	**1.54**	**1.58**	**1.54**	**1.54**

Oil Sands Mining and Upgrading[1]	**2018**	**2019**	**2020**	**2021**	**2022**
Electricity consumption (TWh)	1.86	1.65	1.88	1.95	1.91
Electricity indirect GHG emissions	0.46	0.36	0.49	0.57	0.59
Steam Imports (PJ)	19.02	18.47	17.71	18.25	15.26
Steam indirect GHG emissions	1.20	1.19	1.15	1.15	0.96
Scope 2 GHG emissions (million tonnes CO_2e)	**1.66**	**1.55**	**1.64**	**1.72**	**1.55**

1. Includes Albian's electricity and steam from third-party cogeneration plant.

Scope 2 indirect GHG emissions (million tonnes CO_2e)					
CORPORATE TOTAL	**3.13**	**3.09**	**3.22**	**3.26**	**3.09**

Scope 3 indirect GHG emissions (million tonnes CO_2e)	**2018**	**2019**	**2020**	**2021**	**2022**
Emissions arising from end use of sold products (Category 11)	Not reported	Not reported	Not reported	132	124

AIR EMISSIONS

NO_x emissions (tonnes)	**2018**	**2019**	**2020**	**2021**	**2022**
North America Exploration and Production	55,310	49,191	47,507	53,191	54,192
Oil Sands Mining and Upgrading	15,141	15,866	15,979	15,197	15,246
International Exploration and Production[1]	1,663	1,576	1,473	1,274	1,185
CORPORATE TOTAL	**72,114**	**66,633**	**64,959**	**69,662**	**70,623**

1. UK only.

SO_x emissions (tonnes)	**2018**	**2019**	**2020**	**2021**	**2022**
North America Exploration and Production	6,863	9,364	12,851	11,400	13,416
Oil Sands Mining and Upgrading	2,693	2,737	2,395	2,514	2,775
International Exploration and Production[1]	105	179	180	150	118
CORPORATE TOTAL	**9,661**	**12,280**	**15,426**	**14,064**	**16,309**

1. UK only.

LAND

Abandonment and reclamation projects					
North America Exploration and Production (area-based closure)	**2018**	**2019**	**2020**	**2021**	**2022**
Number of active operated wells	52,643	49,986	48,093	46,454	44,314
Number of inactive operated wells[1]	23,638	28,946	30,188	29,323	28,727
Number of wells abandoned	1,293	2,035	1,065	3,079	3,121
Number of pipelines abandoned	1,149	1,086	866	2,245	2,905
Number of reclamation certificates submitted	1,012	912	1,050	898	1,057
Number of reclamation certificates received	717	893	854	889	765
Hectares reclaimed (area reclamation certified)	1,383	2,160	2,065	1,644	1,787
Trees/seedlings planted	144,417	394,773	503,345	974,917	906,758

1. *Based on Alberta Energy Regulator definition for inactive well sites.*

Oil Sands Mining and Upgrading	2018	2019	2020	2021	2022
Hectares reclaimed	175	276	335	55	55
Trees/seedlings planted	582,144	571,193	874,214	506,265	321,924

Facility decommissioning					
North America Exploration and Production	**2018**	**2019**	**2020**	**2021**	**2022**
Number of facilities and well equipment removed[1]	84	287	502	661	958
Number of site remediation projects completed and ready for reclamation	53	20	28	26	55
Number of ongoing remediation projects	348	351	387	406	363

1. *2018 figures represent facilities removed only. Starting 2019, we include facilities and well equipment removed.*

SPILLS

Reportable spills are reported to regulatory agencies, according to jurisdictional requirements, including oil, produced water and refined products.

Spills and leaks					
Number of reportable spills	**2018**	**2019**	**2020**	**2021**	**2022**
North America Exploration and Production	280	265	172	223[1]	231
Oil Sands Mining and Upgrading	128	93	86	87	59
International Exploration and Production	11	2	6	2	0
CORPORATE TOTAL	**419**	**360**	**264**	**312**	**290**

1. *Revised due to recalculation.*

Volume spilled (m^3)	2018	2019	2020	2021	2022
North America Exploration and Production	1,572	1,824	1,074	1,939	1,707
Oil Sands Mining and Upgrading[1]	20,613	8,100	8,458	9,694	4,023
International Exploration and Production	1.04	0.02	0.72	0.56	0.00
CORPORATE TOTAL	**22,186**	**9,924**	**9,533**	**11,634**	**5,730**

1. *All spills were contained on lease.*

Number of spills/production (MMboe)	2018	2019	2020	2021	2022
North America Exploration and Production	1.12	1.01	0.60	0.67	0.71
Oil Sands Mining and Upgrading	0.69	0.54	0.48	0.44	0.32
International Exploration and Production	0.42	0.07	0.28	0.12	0.00
CORPORATE TOTAL	**0.91**	**0.78**	**0.54**	**0.57**	**0.55**

Volume spilled or leaked/production (m^3/MMboe)	2018	2019	2020	2021	2022
North America Exploration and Production	6.3	6.9	3.8	6.5	5.2
Oil Sands Mining and Upgrading	111.0	46.7	46.8	49.0	21.5
International Exploration and Production	0.04	0.00	0.03	0.03	0.00
CORPORATE TOTAL	**48.1**	**21.4**	**19.6**	**22.7**	**10.9**

Number of leaks/1,000 km pipeline	2018	2019	2020	2021	2022
North America Exploration and Production	1.25	1.20	1.23	1.17	1.31[1]

1. *Increase due to above average sweet natural gas pipeline failures of minor environmental consequence. All leaks were investigated with improvement plans in place.*

WATER

Source water for oil and natural gas operations in Western Canada typically involves a combination of recycled produced water, saline and non-saline (fresh) water. Saline water is defined in Alberta as having greater than 4,000 mg/L total dissolved solids (TDS) and is not suitable for drinking or agricultural use without treatment. Fresh water has less than 4,000 mg/L total TDS concentration.

Fresh water resources are effectively managed by provincial regulators to ensure there are no significant regional effects on water. Canadian crude oil and natural gas are produced under some of the highest environmental standards in the world, including strict water use regulations for fresh water withdrawals, waste water disposal and hydraulic fracturing.

Water that is returned to the environment is tested to ensure the required water quality objectives are met prior to release, complying with relevant provincial and federal regulations pertaining to the disposal and discharge of water and surface water run-off. These regulations are designed to protect receiving waters. For the purposes of this report, water discharge refers to water that is returned to the surface environment. Deep underground disposal is reported separately.

North America Exploration and Production

Water withdrawal (million m^3)	2018	2019	2020	2021	2022
Fresh surface water[1]	4.3	3.6	2.6	4.1	3.7
Fresh groundwater	6.8	6.5	6.5	7.3	6.8
Saline groundwater[2]	8.9	6.9	5.3	5.2	5.3
Produced water[3] and flowback[4] generated	48.1	58.5	66.6	73.7	75.0

1. *All fresh water withdrawn for our NA E&P operations is consumed and therefore not returned to the environment.*
2. *Includes thermal in situ projects (Kirby, Primrose and Wolf Lake, and Jackfish) and conventional water flood projects (Pelican, Brintnell, Pierson and various Saskatchewan).*
3. *All produced water in NA E&P is either recycled or disposed.*
4. *Flowback is the recovered hydraulic fracturing fluid that returns to the surface during a hydraulic fracturing operation.*

Water recycling	2018	2019	2020	2021	2022
Produced water recycled[1] (million m^3)	39.7	48.6	58.6	62.3	62.5
Produced water recycled (%)	82	83	88	85	83

1. *Includes thermal in situ projects (Kirby, Primrose and Wolf Lake, Peace River Complex, Jackfish, Senlac and North Tangleflags) and the following conventional projects, Pelican, Brintnell, Nipisi, Wembley, Sweeny, Pierson, Cliffdale and Septimus.*

Water disposal	2018	2019	2020	2021	2022
Produced water deep disposal (million m^3)[1]	8.5	10.0	8.4	11.4	12.5
Produced water deep disposal (%)	18	17	12	15	17

1. *Includes thermal in situ projects (Kirby, Primrose and Wolf Lake, Peace River Complex, Jackfish, Senlac and North Tangleflags) and the following conventional projects, Pelican, Brintnell, Nipisi, Wembley, Sweeny, Pierson, Cliffdale and Septimus.*

Oil Sands Mining and Upgrading

Water withdrawal (million m^3)	2018	2019	2020	2021	2022
Fresh surface water[1]	68.7	59.4	79.4	59.6	62.6
Fresh groundwater	7.4	6.4	6.7	8.2	8.0
Saline groundwater[2]	0.6	0.4	0.4	0.3	0.3

1. *Includes water withdrawal from the Athabasca River and all other surface water sources for Horizon and Albian, as well as runoff water. Fresh water withdrawals remain well below authorized withdrawal limits.*
2. *Includes water used in Albian's production process and Horizon's saline water from depressurization in the mine that is not used in our production process.*

Water recycling	2018	2019	2020	2021	2022
Water recycled (million m^3)[1]	231	239	237	250	237
Water recycled (%)	81	85	84	86	83

1. *Volumes of water recycled are greater than water withdrawn because water is used more than once through the process.*

Water discharge[1]	2018	2019	2020	2021	2022
Water discharge (million m^3)	2.6	6.7	10.6	10.3	3.5
Water discharge (%)	3	10	12	15	6

1. *Includes Albian clean water discharge from settling ponds designed to remove sediment and Horizon's sump.*

Water Consumption (million m^3)	2018	2019	2020	2021	2022
Fresh water consumption	73.6	59.1	75.5	57.5	67.2

International Exploration and Production

Water discharge (million m^3)	2018	2019	2020	2021	2022
North Sea	15	18	19	16	12
Offshore Africa	1.8	1.6	1.5	1.2	1.2

Water Consumption (million m^3)	2018	2019	2020	2021	2022
Total water consumption[1]	16.8	23.7	22.4	18.1	14.1

1. *Sea water injection (lifted and treated sea water injected downhole to improve production of the fields).*

Oil in water content (mg/l)	2018	2019	2020	2021	2022
North Sea[1]	16.4	16.6	18.5	17.0	17.7
Offshore Africa	11.7	19.5	13.9	16.9	10.3

1. *Oil in water content remains well below regulatory requirement of < 30 mg/l.*

WASTE MANAGEMENT

Canadian Natural manages waste in accordance with jurisdictional regulations, directives and best practices. We minimize, reduce, and monitor site-generated waste using technology and optimizing processes, including recycling, re-use and recovery whenever possible. We are one of the few producers with our own disposal facilities and infrastructure that support our Canadian assets with sand handling, water treatment and oil processing, allowing us to improve waste management, reduce our environmental footprint and decrease transportation distances and costs.

Waste information focuses on oilfield waste, including fluid and solid waste based on a conversion of all volumes to tonnes. Waste quantities fluctuate year to year with production levels, drilling, reclamation, and turnaround activities. Hazardous waste includes streams such as tank clean-out fluids and sludge, workover fluids, filter media and other substances. Non-hazardous waste includes hydrocarbon and salt impacted soils, spent lubricating oil, drilling waste and produced sand.

Waste sent to recycling facilities includes empty containers, lube oil, batteries, filters, tires, scrap metal and other miscellaneous recyclables.

Weight of waste (thousand tonnes)

North America Exploration and Production	2018	2019	2020	2021	2022
Hazardous waste (off-site disposal, third-party)	78	81	79	120[1]	79
Non-hazardous waste disposal[2]	1,378	1,233	943	1,243[1]	1,382
On-site disposal (owned)[2]	506	592	509	645	862
Off-site disposal (third-party)	872	642	433	600	520

1. *Increased operational activity levels and the completion of three turnaround periods at thermal operations contributed to higher levels of waste disposal.*
2. *2018-2020 values adjusted due to reclassification of non-hazardous waste materials.*

Oil Sands Mining and Upgrading	2018	2019	2020	2021	2022
Hazardous waste (off-site disposal, third-party)	0.49	0.31	0.24	0.17	0.14
Hazardous waste recycled[1]	8	0.32	0.27	0.45	0.19
Non-hazardous waste disposal	18	16	20	19	17
On-site disposal (owned)	13	15	19	17	15
Off-site disposal (third-party)	4	0.44[2]	1	1	1
Non-hazardous waste recycled	40	39	36	26	28

1. *Hazardous waste recycled in oil sands mining and upgrading operations decreased due to a reclassification of used lube oil in 2019.*
2. *Non-hazardous waste off-site disposal in oil sands mining and upgrading decreased, with majority of waste being recycled.*

International Exploration and Production[1]	2018	2019	2020	2021	2022
Hazardous waste disposal	0.17	0.05	0.04	0.41	0.39
Hazardous waste recycled	0.04	0.07	0.11	0.07	0.14
Non-hazardous waste disposal	0.30	0.11	0.07	0.01	0.05[2]
Scrap metal recycled[3]	15	0.42	0.27	11.57	0.28[4]
Other non-hazardous waste recycled	0.37	0.53	0.39	0.32	0.11

1. *All international operations waste is disposed of or treated at third-party facilities. Ninian South has a dedicated drill cuttings re-injection well, therefore no drilling waste is sent to shore.*
2. *Non-hazardous waste volume increased in 2022 due to minor incremental rises in the waste sent to landfill and for incineration.*
3. *Includes Murchison and Ninian North decommissioning projects in 2018, Ninian North topsides decommissioning onshore in 2021.*
4. *Scrap metal recycling volumes decreased in 2022 due to a reduction in decommissioning activities.*

Corporate Totals	2018	2019	2020	2021	2022
Hazardous waste disposal	79	81	79	121	80
Hazardous waste recycled	8	0.4	0.4	0.5	0.3
Non-hazardous waste disposal	1,396	1,249	963	1,262	1,399
Non-hazardous waste recycled	56	40	36	38	28

Independent practitioner's reasonable and limited assurance report on selected performance indicators in Canadian Natural Resources Limited's 2022 Stewardship Report to Stakeholders.

To the Directors of Canadian Natural Resources Limited (the "Company')

We have undertaken a reasonable assurance engagement over the following performance indicators (the "reasonable assurance subject matter") as presented in the Company's 2022 Stewardship Report to Stakeholders (the "2022 Sustainability Report"), hosted on the Company's website[1], for the year ended December 31, 2022.

Level of Assurance	KPI #	Performance Indicator	2022 Value	Units
Reasonable	1	Scope 1 (Direct) Emissions - North America Exploration and Production	15.12	million tonnes CO_2e
	2	Scope 1 (Direct) Emissions - Oil Sands Mining and Upgrading	7.35	million tonnes CO_2e
	3	Scope 1 (Direct) Emissions - International Exploration and Production	0.78	million tonnes CO_2e
	4	Scope 2 (Indirect) Emissions - North America Exploration and Production	1.54	million tonnes CO_2e
	5	Scope 2 (Indirect) Emissions - Oil Sands Mining and Upgrading	1.55	million tonnes CO_2e

We have also undertaken a limited assurance engagement over the following performance indicator (the limited assurance subject matter) as presented in the 2022 Sustainability Report, for the year ended December 31, 2022.

Level of Assurance	KPI #	Performance Indicator	2022 Value	Units
Limited	6	Scope 3 (Indirect) GHG Emissions - Emissions arising from the end use of sold products (Category 11)	124	million tonnes CO_2e

[1] The maintenance and integrity of the Company's website is the responsibility of the Company; the work carried out by PricewaterhouseCoopers LLP does not involve consideration of these matters and, accordingly, PricewaterhouseCoopers LLP accepts no responsibility for any changes that may have occurred to the reported information or criteria since they were posted on the website.

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Management's responsibility
Management is responsible for the preparation of the reasonable assurance subject matter and limited assurance subject matter in accordance with the GHG Protocol Corporate Accounting and Reporting Standard, and the corporate boundaries and policies as outlined in the 2022 Sustainability Report (together, the "applicable criteria").

Management is also responsible for such internal control as management determines necessary to enable the preparation of the reasonable assurance subject matter that is free from material misstatement, whether due to fraud or error.

Our responsibility for reasonable assurance
Our responsibility is to express a reasonable assurance opinion on the reasonable assurance subject matter based on the evidence we have obtained. We conducted our reasonable assurance engagement in accordance with the Canadian Standard on Assurance Engagements ("CSAE") 3410, *Assurance Engagements on Greenhouse Gas Statements*.

This standard requires that we plan and perform this engagement to obtain reasonable assurance about whether the reasonable assurance subject matter is free from material misstatement.

Reasonable assurance is a high level of assurance, but is not a guarantee that an engagement conducted in accordance with this standard will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the decisions of users of our report. The nature, timing and extent of procedures selected depends on our professional judgment, including an assessment of the risks of material misstatement, whether due to fraud or error, and involves obtaining evidence about the preparation of the reasonable assurance subject matter in accordance with the applicable criteria. A reasonable assurance engagement also includes:

- Making enquiries of management to obtain an understanding of the overall governance and internal control environment, risk management processes relevant to the data metrics in the reasonable assurance subject matter;
- Evaluating the appropriateness of quantification methodology and reporting policies used, and the reasonableness of estimates made by the Company;
- Analytical reviews and trend analysis of the reasonable assurance subject matter;
- Recalculation of the scope 1 and scope 2 reported emissions;
- Sample testing the underlying source data to supportive evidence; and
- Evaluating the overall presentation of the reasonable assurance subject matter and limited assurance subject matter included in their performance table.

We believe the evidence we obtained is sufficient and appropriate to provide a basis for our reasonable assurance opinion.

Our responsibility for limited assurance
Our responsibility is to express a limited assurance conclusion on the limited assurance subject matter based on the evidence we have obtained. We conducted our limited assurance engagement in accordance with CSAE 3410, *Assurance Engagements on Greenhouse Gas Statements*. This standard requires that we plan and perform this engagement to obtain limited assurance about whether the limited assurance subject matter is free from material misstatement.

A limited assurance engagement involves performing procedures (primarily consisting of making inquiries of management and others within the entity, as appropriate, and applying analytical procedures) and evaluating the evidence obtained. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the decisions of users of our report. The procedures are selected based on our professional judgment, which includes identifying areas where the risks of material misstatement, whether due to fraud or error, in preparing the limited assurance subject matter in accordance with the applicable criteria are likely to arise.

Our limited assurance procedures included, but were not limited to the following:

- Enquiries of management to obtain an understanding of the overall governance and internal control environment, risk management processes relevant to the data metrics in the limited assurance subject matter;
- Analytical reviews and trend analysis of the reported limited assurance subject matter;
- Reconciled underlying data to reported data and performed limited sample testing of the underlying data referenced in the limited assurance subject matter.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement and, consequently, the level of assurance obtained is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Inherent uncertainty
Non-financial data is subject to more inherent limitations than financial data, given both the nature and the methods used for the determining, calculating, sampling or estimating such data. Qualitative interpretations of relevance, materiality and the accuracy of data are subject to individual assumptions and judgments. Greenhouse gas quantification is subject to inherent uncertainty because of incomplete scientific knowledge used to determine emissions factors and the values needed to combine emissions of different gases.

Our independence and quality management
We have complied with the relevant rules of professional conduct/code of ethics applicable to the practice of public accounting and related to assurance engagements, issued by various professional accounting bodies, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

The firm applies Canadian Standard on Quality Management 1, *Quality Management for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance Engagements,* and, accordingly, maintains a comprehensive system of quality management, including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Opinion - Reasonable Assurance
In our opinion, the reasonable assurance subject matter for the year ended December 31, 2022 is prepared, in all material respects, in accordance with the applicable criteria.

Conclusion - Limited Assurance
Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the limited assurance subject matter for the year ended December 31, 2022 is not prepared, in all material respects, in accordance with the applicable criteria.

Purpose of statement and restriction on use of our report
The selected information has been prepared in accordance with the applicable criteria to assist the Company's management to report to the Board of Directors on the performance indicators. As a result, the reasonable assurance subject matter and limited assurance subject matter may not be suitable for another purpose.

Our report is intended solely for the Company. We acknowledge the disclosure of our report, in full only, by the Company at its discretion, without assuming or accepting any responsibility or liability to any third party in respect of this assurance report.

PricewaterhouseCoopers LLP

Chartered Professional Accountants

Vancouver, British Columbia
August 2, 2023

Forward Looking Statements

Certain statements relating to Canadian Natural Resources Limited (the "company") in this document or documents incorporated herein by reference constitute forward-looking statements or information (collectively referred to herein as "forward-looking statements") within the meaning of applicable securities legislation. Forward-looking statements can be identified by the words "believe", "anticipate", "expect", "plan", "estimate", "target", "continue", "could", "intend", "may", "potential", "predict", "should", "will", "objective", "project", "forecast", "goal", "guidance", "outlook", "effort", "seeks", "schedule", "proposed", "aspiration" or expressions of a similar nature suggesting future outcome or statements regarding an outlook. Disclosure related to expected future commodity pricing, forecast or anticipated production volumes, royalties, production expenses, capital expenditures, income tax expenses, and other targets provided throughout this presentation and the Management's Discussion and Analysis ("MD&A") of the financial condition and results of operations of the company, constitute forward-looking statements. Disclosure of plans relating to and expected results of existing and future developments, including, without limitation, those in relation to: the company's assets at Horizon Oil Sands ("Horizon"), the Athabasca Oil Sands Project ("AOSP"), the Primrose thermal oil projects, the Pelican Lake water and polymer flood projects, the Kirby Thermal Oil Sands Project, the Jackfish Thermal Oil Sands Project and the North West Redwater bitumen upgrader and refinery; construction by third parties of new, or expansion of existing, pipeline capacity or other means of transportation of bitumen, crude oil, natural gas, natural gas liquids ("NGLs") or synthetic crude oil ("SCO") that the company may be reliant upon to transport its products to market; the development and deployment of technology and technological innovations; the financial capacity of the company to complete its growth projects and responsibly and sustainably grow in the long-term; and and impact of the Pathways Alliance ("Pathways") initiative and activities, government support for Pathways and the ability to achieve net zero emissions from oil production, also constitute forward-looking statements. These forward-looking statements are based on annual budgets and multi-year forecasts, and are reviewed and revised throughout the year as necessary in the context of targeted financial ratios, project returns, product pricing expectations and balance in project risk and time horizons. These statements are not guarantees of future performance and are subject to certain risks. The reader should not place undue reliance on these forward-looking statements as there can be no assurances that the plans, initiatives or expectations upon which they are based will occur.

In addition, statements relating to "reserves" are deemed to be forward-looking statements as they involve the implied assessment based on certain estimates and assumptions that the reserves described can be profitably produced in the future. There are numerous uncertainties inherent in estimating quantities of proved and proved plus probable crude oil, natural gas and NGLs reserves and in projecting future rates of production and the timing of development expenditures. The total amount or timing of actual future production may vary significantly from reserves and production estimates.

The forward-looking statements are based on current expectations, estimates and projections about the company and the industry in which the company operates, which speak only as of the earlier of the date such statements were made or as of the date of the report or document in which they are contained, and are subject to known and unknown risks and uncertainties that could cause the actual results, performance or achievements of the company to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Such risks and uncertainties include, among others: general economic and business conditions (including as a result of effects of the novel coronavirus ("COVID-19") pandemic, the actions of the Organization of the Petroleum Exporting Countries Plus ("OPEC+") and inflation) which may impact, among other things, demand and supply for and market prices of the Company's products, and the availability and cost of resources required by the company's operations; volatility of and assumptions regarding crude oil, natural gas and NGLs prices including due to actions of OPEC+ taken in response to COVID-19 or otherwise; fluctuations in currency and interest rates; assumptions on which the company's current targets are based; economic conditions in the countries and regions in which the company conducts business; political uncertainty, including actions of or against terrorists, insurgent groups or other conflict including conflict between states; industry capacity; ability of the company to implement its business strategy, including exploration and development activities; impact of competition; the company's defense of lawsuits; availability and cost of seismic, drilling and other equipment; ability of the company and its subsidiaries to complete capital programs; the company's and its subsidiaries' ability to secure adequate transportation for its products; unexpected disruptions or delays in the mining, extracting or upgrading of the company's bitumen products; potential delays or changes in plans with respect to exploration or development projects or capital expenditures; ability of the company to attract the necessary labour required to build, maintain, and operate its thermal and oil sands mining projects; operating hazards and other difficulties inherent in the exploration for and production and sale of crude oil and natural gas and in the mining, extracting or upgrading of the company's bitumen products; availability and cost of financing; the company's and its subsidiaries' success of exploration and development activities and its ability to replace and expand crude oil and natural gas reserves; the company's ability to meet its targeted production levels; timing and success of integrating the business and operations of acquired companies and assets; production levels; imprecision of reserves estimates and estimates of recoverable quantities of crude oil, natural gas and NGLs not currently classified as proved; actions by governmental authorities; government regulations and the expenditures required to comply with them (especially safety and environmental laws and regulations and the impact of climate change initiatives on capital expenditures and production expenses); asset retirement obligations; the sufficiency of the company's liquidity to support its growth strategy and to sustain its operations in the short, medium, and long-term; the strength of the company's balance sheet; the flexibility of the company's capital structure; the adequacy of the company's provision for taxes; and other circumstances affecting revenues and expenses.

The company's operations have been, and in the future may be, affected by political developments and by national, federal, provincial, state and local laws and regulations such as restrictions on production, changes in taxes, royalties and other amounts payable to governments or governmental agencies, price or gathering rate controls and environmental protection regulations. Should one or more of these risks or uncertainties materialize, or should any of the company's assumptions prove incorrect, actual results may vary in material respects from those projected in the forward-looking statements. The impact of any one factor on a particular forward-looking statement is not determinable with certainty as such factors are dependent upon other factors, and the company's course of action would depend upon its assessment of the future considering all information then available.

Readers are cautioned that the foregoing list of factors is not exhaustive. Unpredictable or unknown factors not discussed in this presentation or the company's MD&A could also have adverse effects on forward-looking statements. Although the company believes that the expectations conveyed by the forward-looking statements are reasonable based on information available to it on the date such forward-looking statements are made, no assurances can be given as to future results, levels of activity and achievements. All subsequent forward-looking statements, whether written or oral, attributable to the company or persons acting on its behalf are expressly qualified in their entirety by these cautionary statements. Except as required by applicable law, the company assumes no obligation to update forward-looking statements in this presentation or the company's MD&A, whether as a result of new information, future events or other factors, or the foregoing factors affecting this information, should circumstances or the company’s estimates or opinions change.

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Our 2022 Stewardship Report to Stakeholders aligns with recommendations from the Financial Stability Board Task Force on Climate-Related Financial Disclosures (TCFD) and the Sustainability Accounting Standards Board (SASB). The Report includes consolidated ESG and economic disclosures from the Global Reporting Initiative (GRI) Sustainability Reporting Standards and the Oil and Gas Sector Supplement. Our activities also contribute towards the United Nations Sustainable Development Goals (SDGs). Our disclosures and sustainability content are summarized in the TCFD disclosures index and GRI, SASB and SDG disclosures index as well as the Sustainability Reporting section of our website.

We welcome your comments and suggestions on this report.

Canadian Natural produces a separate Annual Report, which is also available online.

Canadian Natural

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