# 2022 ENVIRONMENTAL, SOCIAL & GOVERNANCE REPORT

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### **CONTENTS**

EXECUTIVE SUMMARY	3
Message from our Board of Directors	4
Message from our President & Chief Executive Officer	6
Sustainability highlights	7
Message from our Chief Sustainability Officer & Executive Vice-President, Stakeholder Engagement	8
OUR SAFETY CULTURE	12
ESG FOCUS AREAS	19
Climate & GHG emissions	19
Water stewardship	44
Biodiversity	49
Indigenous reconciliation	55
Inclusion & diversity	61
GOVERNANCE	67
ESG DATA	75
APPENDIX	89
Overview & approach	90
Stakeholder engagement	92
United Nations Sustainable Development Goals	93
TCFD index table	95
SASB index	96
Advisory	104
Independent assurance	106

#### LAND ACKNOWLEDGMENT

In the spirit of respect, reciprocity and truth, we acknowledge we work on the traditional lands of multiple Indigenous peoples in our many operating areas. In Canada, this includes First Nations, Métis and Inuit, and in the United States this includes tribal nations. We acknowledge and thank the diverse Indigenous peoples who live on and steward this land, and we honour and celebrate this territory.



# **EXECUTIVE** SUMMARY





# **MESSAGE FROM OUR BOARD OF DIRECTORS**



• Alex Pourbaix, Executive Chair of the Board



 Richard J. Marcogliese, Chair of the Board's Safety, Sustainability and Reserves Committee

#### The following Board and executive appointments became effective April 26, 2023:

- Alex Pourbaix became Executive Chair of the Board (formerly President & Chief Executive Officer) – responsible for providing leadership to the Board and ensuring ongoing strong governance, while supporting management's development and execution of the corporate strategy.
- Claude Mongeau became Lead Independent Director of the Board – primary objective is to ensure the continued efficient operation of the Board and independent decision making.

Jon McKenzie became President & Chief Executive Officer and Board Director (formerly Executive Vice-President & Chief Operating Officer) – responsible for establishing the strategic direction for the company and delivering strong financial, operational and sustainability performance.

#### At Cenovus, the Board supports sustainability being embedded in how we do business.

We approve Cenovus's corporate strategic plan, which takes into account the opportunities and risks to the business, including those related to environmental, social and governance (ESG) matters, and have oversight of the company's approach to sustainability.

The Board is committed to sustainability, which is a key tenet of Cenovus's approach to business and recognizes the importance of reporting on sustainability matters in a transparent and accountable way.

Our goal of sustainability leadership means a focus on continued progress, and in 2022 Cenovus advanced multiple initiatives across our five ESG focus areas. This report highlights how Cenovus progressed its overall ESG performance in 2022 as well as what the company is focusing on in 2023 and beyond. In December 2022, Cenovus announced the appointment of Melanie Little to the Board, effective January 1, 2023, which increased midstream expertise on our Board while also achieving the gender component of our Board diversity target. We also approved expanding the environmental metric used in the annual corporate performance scorecard. We now use a sustainability performance index that includes all of our ESG focus areas, rather than solely focusing on safety and reducing greenhouse gas (GHG) emissions. The corporate performance scorecard is tied to annual management and employee compensation and this incentive recognizes the importance of progress within all of our ESG focus areas. In early 2023, the Board approved amendments to the company's Code of Business Conduct & Ethics and the mandate of the Safety, Sustainability and Reserves Committee to more clearly articulate the governance and alignment of our lobbying and public advocacy activities with our corporate objectives, strategy, targets and ambition. We also added enhanced lobbying information to our website.

We dedicate a significant amount of time to ensuring Cenovus has a strong internal succession plan, with priorities and strategies remaining aligned. Our recent appointment of Jon McKenzie as President & Chief Executive Officer and the changes made to the Board's structure with the shift to an Executive Chair plus a Lead Independent Director, demonstrate our commitment to good governance and the ongoing success of the organization. The Board is confident in Cenovus's long-term strategy.

Sustainability is a key tenet of Cenovus's approach to business and the Board recognizes the importance of reporting on sustainability matters in a transparent and accountable way. As the company advances its sustainability journey, which must address the dual imperatives of decarbonization while contributing to global energy security, we will continue supporting our management team to ensure Cenovus's long-term resilience.

#### BOARD DIVERSITY

In December 2022, we announced the appointment of Melanie Little to the Board, effective January 1, 2023, which increased midstream expertise on our Board while also achieving the gender component of our Board diversity target.

#### PERFORMANCE

In 2022, the Board approved including a more fulsome sustainability performance index in the annual corporate performance scorecard that captures all five of our ESG focus areas.



# **MESSAGE FROM OUR PRESIDENT & CHIEF EXECUTIVE OFFICER**



The turmoil in the global commodity market in 2022 made clear the critical role our industry plays in helping ensure an affordable, abundant and reliable supply of energy. For Cenovus to remain resilient in a decarbonized world, we must also continue to make progress on our sustainability leadership.

We are positioning our company for long-term success – a sustainability leader helping produce a stable global energy supply for decades to come.

As I look across our operations, we are finding that balance as we deliver on our commitment to being a low-cost, integrated energy producer while we work to reduce emissions. We also remain focused on using less water, restoring the land where we operate, supporting economic self-sufficiency in neighbouring Indigenous communities and progressing inclusion and diversity efforts across our organization. By taking these actions, we are positioning our company for long-term success – a sustainability leader helping produce a stable global energy supply for decades to come.

# Safety is foundational to our sustainability leadership

At Cenovus we value safety above all else. I cannot say this enough. Without a strong safety record, we can never truly be successful. In 2022, we achieved several safety milestones at our owned and operated facilities:

- Our Atlantic and Asia Pacific regions achieved zero recordable injuries.
- Total recordable injury rate (TRIR) at our Lima Refinery improved to 0.10 in 2022 from 0.49 in 2021, with no lost time injuries.
- Foster Creek halved its TRIR to 0.06 in 2022 from 0.12 in 2021, also without any lost time injuries.

While these have us moving in the right direction, incidents at our non-operated refineries reminded us we must never take our safety performance for granted. In 2023, we safely restarted the Superior Refinery and restarted and completed the acquisition of the Toledo Refinery. Looking ahead, we will be unrelenting in our efforts to ensure Cenovus's strong safety culture is embedded at every site where we operate as we strive for continuous improvement everywhere we work.

#### Collaboration on decarbonization

As we deliver on the strategic direction we've established for Cenovus. I know our teams feel the same drive I do to remain competitive while advancing towards our ESG targets. In particular, decarbonizing our oil and natural gas production and helping Canada achieve its net zero goal requires collaboration between industry and governments. As we advance Cenovus's emissions reduction efforts, including methane reductions and carbon capture projects, we're working with our Pathways Alliance oil sands peers on collaborative projects such as the foundational carbon dioxide (CO<sub>3</sub>) capture, transportation and storage project. Megaprojects like this require completing evaluation, regulatory, legal and engineering work up front before we can put shovels in the ground, and that work is well underway. I'm confident we are making the progress needed to position this work to succeed. We're also working closely with governments to ensure public policy is carefully designed to drive rapid and achievable emissions reductions while maintaining our sector's competitiveness. We believe these efforts will help ensure Canada is the preferred choice to meet global oil and natural gas demand in a lower-carbon future.

JON McKENZIE President & Chief Executive Officer

### SUSTAINABILITY HIGHLIGHTS



Funded 81 new homes between 2020 and 2022

in Indigenous communities near our oil sands operations



Plan to reduce absolute methane emissions in upstream operations by



by year-end 2028, from a 2019 baseline.



Held oil sands fresh water intensity at 0.12

Spent more than \$1 billion with Indigenous businesses since 2019

Reclaimed 1.992 well sites since 2019



Achieved 50% progress toward restoration target in the Cold Lake caribou range

Completed 2 water management plans,

with efforts underway to complete 10 in 2023 and all plans by year-end 2025



Restored more than 180 km of linear forest features in 2022

Signed a PPA to buy renewable electricity and associated emissions offsets

bbls water/BOE



Increased social investments to \$28.2 million in 2022, from \$19.3 million in 2021



Recycled more than 58 million cubic metres of water in 2022

Launched voluntary staff self-identification survey

# MESSAGE FROM OUR CHIEF SUSTAINABILITY OFFICER & EXECUTIVE VICE-PRESIDENT, STAKEHOLDER ENGAGEMENT



We're continuing to progress actions across the company to support the achievement of our ESG targets. Our staff understand how our sustainability efforts add value for Cenovus and are working together to deliver tangible improvements. We're able to clearly benchmark progress, including assessing where we're on track and where we may need to amplify our efforts. You'll see disclosure of that progress throughout this report.

#### **Progress towards our ESG targets**

We are reporting in detail about our five ESG focus areas, with an emphasis on GHG emissions. As we continue to advance a number of longer-term projects to reduce emissions in our operations, we also need to reduce emissions now. Methane, a potent greenhouse gas, is an area where we can make rapid, meaningful reductions. In 2023, we announced a new methane milestone that will see us reduce absolute methane emissions in our upstream operations by 80% by year-end 2028, from a 2019 baseline. This will be a key milestone towards our target to reduce absolute GHG emissions by 35% by year-end 2035 as we build toward our long-term net zero ambition. Our internal Methane Challenge Team, which involves multiple business units collaborating to take action on methane, has developed a plan to help us achieve near-term reductions which includes prioritizing a significant inventory of abatement projects across our upstream operations. We've allocated more than \$100 million in our five-year business plan to support these efforts and build on the work we've already done in this area.

The actions we're pursuing across

the company are progressing

performance towards achieving

our ESG targets.

Carbon capture also plays an important role to reduce overall emissions, and in 2022, we advanced several projects, including drilling an appraisal well at our

Minnedosa Ethanol Plant to help us better understand the reservoir where CO<sub>2</sub> will be sequestered, completing design and engineering studies for carbon capture and storage for our Christina Lake oil sands asset and evaluating a potential reservoir at our Elmworth gas plant. This is in addition to the CO<sub>2</sub> we're already capturing at our Pikes Peak South thermal project via our pilot work with clean-tech company Svante, and at our Lloydminster Ethanol Plant. This report further outlines how we're using technology in our decarbonization efforts to make reductions and build towards our ambition of net zero by 2050. I also want to highlight the work we've done on our biodiversity targets. We are 66% of the way to our target of reclaiming 3,000 decommissioned well sites by year-end 2025 and halfway to our target of restoring more habitat than we use in the Cold Lake caribou range by year-end 2030. We continue to introduce innovations into our restoration program, including the use of new

> mounding techniques that are ideal for terrain near our Foster Creek oil sands asset. Recognizing that climate and nature concerns are connected, we've also advanced a GHG study at Foster Creek to better understand restoration

programs applied to wetlands and how they relate to the carbon sequestration cycle.

We're seeing the results of our continued focus on Indigenous reconciliation and with respect to our ESG target, are working to ensure communities near our operations share in the benefits of resource development. We've already invested more than \$1 billion of capital and operating spend with Indigenous businesses since launching our target to achieve a minimum \$1.2 billion of spending between 2019 and year-end 2025. In 2022 alone, we spent on average more than \$1 million each day with Indigenous businesses. We value these relationships, and will continue looking for additional opportunities to work with Indigenous vendors.

#### **Opportunities to improve**

While we have many more successes to share across our focus areas, it's also important to identify opportunities for further improvement, and how we're taking action to address them. To help achieve our women in leadership target, where our numbers remained flat year over year, we're working on an updated strategy to attract and retain female employees at all levels, with a specific focus on leaders. On our water stewardship efforts, while we've maintained target-level fresh water intensity at our oil sands operations, we're still tackling fresh water intensity in our thermal operations, and are putting plans in place to help reduce intensity in coming years. We share further details on both our successes and opportunities in this report.

#### Committed to collaboration

As we drive toward our targets and net zero ambition, innovation and collaboration are crucial. One example is our commitment to develop water management plans for all our operated assets. This work brings together experts from

business units across Cenovus to help us manage water use throughout the life cycle of our operations. In 2022, we completed our first plans, for our Edson conventional and Lloydminster Upgrader and Ethanol Plant operations, and work is well underway to complete several more in 2023. Externally, our partners such as Avatar Innovations are helping further accelerate the advancement and commercialization of new decarbonization technologies. Thirty Cenovus employees were invited to participate in the 2022 Avatar Ignite Program, a crash course in innovation and entrepreneurship, up from 13 the year before. Through the program, teams pitch energy transition solutions to a Shark Tank-style panel of Canadian senior energy executives. The focus is on practical results, as the best projects move to the next step where innovations are implemented.

Being a sustainability leader takes both ambition and action. As we continue to demonstrate, Cenovus is up to the challenge, taking measurable steps to achieve our ESG targets and net zero ambition, and helping shape our energy future.

#### **RHONA DELFRARI**

Chief Sustainability Officer & Executive Vice-President, Stakeholder Engagement

# In March 2023, Cenovus's Chief Sustainability Officer Rhona DelFrari was promoted to Executive Vice-President, Stakeholder Engagement, from Senior-Vice President, reflecting the growing importance of the portfolio to our long-term success, as well as Rhona's industry leadership and expertise.

#### Our values help guide our actions



# Protect what **matters**.

Safety will always be our top value. We care about each other, our communities and the environment.



Performance matters and we always look for opportunities to improve. We make decisions with a sense of urgency and pivot to meet changing needs. We don't shy away from hard work or difficult conversations.



Accountability is vital and how we achieve results makes a difference. We listen, respect and value diversity. We are transparent and act with integrity.



We are one team. Together we win, grow and celebrate. We're determined to be successful through inclusivity, trust and empowerment.

# **PROGRESS AGAINST OUR TARGETS**

Focus area	Unit of measure	% toward target	Target	2022	2021	2020	2019
Climate & GHG emissions							
Reduce absolute GHG emissions by 35% by year-end 2035 <sup>1</sup> . Reach long-term ambition for net zero emissions by 2050	MMt CO <sub>2</sub> e	-	-	22.1	<b>23.1</b> <sup>2</sup>	23.2 <sup>2</sup>	<b>24.8</b> <sup>2</sup>
2022 adjusted performance. Rebaselined and adjusted emissions <sup>3</sup> for target performance comparison		22%	16.9 <sup>3</sup>	24.0 <sup>4</sup>			26.0 <sup>3</sup>
Water stewardship							
Reduce fresh water intensity by 20% in oil sands by year-end 2030	bbls water/BOE	100	0.12	0.12	0.12	0.15	0.15
Reduce fresh water intensity by 20% in thermal operations by year-end 2030	bbls water/BOE	0	2.90	4.00	3.71	3.85	3.62
Biodiversity							
Reclaim 3,000 decommissioned well sites by year-end 2025	Number	66	3,000	537	421	473	561
Restore more habitat than we use in the Cold Lake caribou range by year-end 2030	Ratio	50	>1	0.50	0.41	0.34	0.34
Indigenous reconciliation							
Achieve a minimum of \$1.2 billion of spending with Indigenous businesses between 2019 and year-end 2025	\$MM	88	1,200	395	221	194	244
Attain Gold Progressive Aboriginal Relations certification from the Canadian Council for Aboriginal Business by year-end 2025	-	-	gold	Phase 2 complete	Phase 1 complete	-	-
Inclusion & diversity							
Increase women in leadership roles to 30% by year-end 2030 <sup>5</sup>	Percentage	83	30	25	25	25	24
Conduct a self-identification survey by year-end 2022; add diversity target beyond gender in 2023	-	-	-	Survey launched	Survey drafted	-	-
Aspire to have at least 40% representation from designated groups <sup>6</sup> among non-management directors	Percentage	90	40	36	36	-	-
Including at least 30% women, by year-end 2025	Percentage	90	30	27	27	-	-

Targets include start year: 2019 for emissions, water intensity, well reclamation and Indigenous business spend; 2016 for caribou habitat restoration.

1 Emissions reductions are in reference to scope 1 and 2, on a net equity basis.

2 Prior year emissions values have been restated. Update is primarily related to emissions from joint venture assets.

3 The absolute emissions target and 2019 baseline have been adjusted to reflect material asset changes, including acquisitions and divestitures, up to the end of the first quarter of 2023, to capture the Toledo transaction. We intend to continue using this approach of adjusting our emissions baseline to reflect material changes to our portfolio. Performance toward our target is then measured against this adjusted baseline.

4 This figure has been updated to align with the adjusted 2019 baseline, and to allow comparison, the adjusted 2022 emissions number assumes 100% ownership of Sunrise and Toledo and full operations at Superior for all of 2022.

5 2021 data has been updated to reflect total company operations. Leadership roles include Team Lead/Coordinator/Supervisor positions or above.

6 Designated groups are defined as women, Indigenous peoples, persons with disabilities and members of visible minorities.

# WHO WE ARE

# Cenovus Energy Inc. is an integrated energy company.

Our upstream operations include oil sands projects in northern Alberta, thermal and conventional crude oil and natural gas projects across Western Canada, crude oil production offshore Newfoundland and Labrador, and natural gas and liquids production offshore China and Indonesia.

Our downstream business includes upgrading and refining operations in Canada and the United States and commercial fuel operations across Canada. We are focused on managing our assets in a safe, innovative and cost-efficient manner, integrating sustainability considerations into our business plans. Cenovus common shares and warrants are listed on the Toronto and New York stock exchanges, and the company's preferred shares are listed on the Toronto Stock Exchange. For more information, visit cenovus.com.

On January 1, 2021 Cenovus completed a strategic combination with Husky Energy Inc. These two companies have been successfully integrated, creating a resilient integrated energy leader that is well positioned to create long-term value for investors.

#### We operate in Canada, the United States and the Asia Pacific region.



2022 AT A GLANCE



Upgrading & refining capacity 740,000 bbls/d<sup>1</sup> Proved & probable reserves **8.9** billion BOE



# 2 OUR SAFETY CULTURE

The safety of our people and the communities where we work, and the integrity of our assets are foundational to all that we do.

Safety is engrained in our values and culture, and reinforced in every decision.

 Emergency training exercise, Christina Lake oil sands asset, AB

# **OUR SAFETY CULTURE**

#### GOVERNANCE

#### Safety Policy

Our commitment to our workers is that they return home safe every day. Our Safety Policy sets out eight safety commitments that define the attitude and behaviours we expect from everyone who works with us, or for us, fostering a culture that empowers workers to speak up if they see an unsafe situation or feel the work they've been asked to do is not safe.

#### Safety Operations Risk Committee

Senior leadership, representing each of the jurisdictions in which we operate, sit on the Safety Operations Risk Committee. They have direct responsibility and authority to create the desired safety culture, and to govern, sustain and oversee implementation of the Cenovus Operations Integrity Management System (COIMS), which defines our approach to operating safely, responsibly and efficiently. These actions will help us achieve our safety objectives. The committee develops risk management-based strategies and provides direction to ensure entities<sup>1</sup> and functional groups develop plans to meet Cenovus's safety objectives. It also monitors progress and provides course correction as required.

#### Joint Health & Safety Committees

Across the organization, workers and management at our owned and operated sites sit on joint Health & Safety Committees, which address health and safety-related concerns, including significant incident investigations. These groups work together to identify and solve issues, and support three basic workers' rights:

- Right to know
- Right to participate
- Right to refuse unsafe work

### STRATEGY

Our goal is to be a sustained top-quartile performer in process and occupational safety, as measured against industry benchmarks.

Cenovus's safety model emphasizes a learning culture that empowers and gives responsibility for safety to those on the ground. We incentivize safety performance across the organization by including key metrics in our corporate scorecard, which is tied to compensation for management and all employees.

Our goal is to be a sustained top-quartile performer in process and occupational safety, as measured against industry benchmarks. We follow the principles of good operating practices set out in COIMS. Our facilities and assets are designed, maintained and operated to realize safe and reliable operational performance with a primary focus on the safety of our people, the community and the environment. We actively assess the risk profile of our infrastructure to mitigate and manage risk. In the event of an incident, community and worker safety, stabilizing the incident and protecting the environment are our priorities.

We continue to strengthen our approach to safety, developing the systems, standards, tools, expertise and oversight required to become a sustained top-quartile safety performer. This means maturing our safety culture, continuously learning and applying our knowledge, and making the necessary changes to improve our performance.

1 An asset, collection of assets, major project or Operations Technical Services function that operates under a single operations or functional leader, and has work activities that are governed by common processes and procedures.

#### **RISK MANAGEMENT**

As an integrated energy company, we are exposed to inherent health and safety hazards. We have extensive programs in place to manage these associated risks, minimizing the likelihood of a significant incident and helping to achieve our safety objectives and commitments.

Our Cenovus risk matrix is a standardized tool that assists with risk assessment across our business and asset base, and is critical to the successful management of risk in our business.

We provide guidance and robust health and safety training to staff so they are able to stay safe and meet our safety requirements. We regularly conduct self verification and assurance to COIMS requirements, and review our performance related to health, safety and environmental objectives, ensuring our potential risks continue to be managed.

Creating and sustaining a culture that delivers continuous improvement in safety performance and process safety management is one of the key ways to manage safety risks, and this continues to be a priority for Cenovus. Leaders are expected to manage the risks associated with their respective business activities and model the safety leadership behaviours defined in our safety culture.

#### **Cenovus Operations Integrity Management System**

COIMS, Cenovus's approach to operating safely, responsibly and efficiently, is an important tool in our efforts to become a sustained top-quartile safety performer in process and occupational safety. COIMS is organized into 15 integrated elements that work together as a system to identify and manage risks. Each Cenovus operating entity has been assessed against the requirements in each element, and actions to address identified gaps are tracked to closure.

Collaboration between our technical experts, operations leadership and frontline workers to understand the needs of each business entity has been key to ensuring that COIMS is fit for purpose and can be applied across the business. Implementation is supported by the ongoing focus of leadership in the field and learning from incidents. Full implementation and maturity of COIMS in support of our safety ambition will be a multi-year journey.

> COIMS Cenovus Operations Integrity Management System



#### DOINK THE DOG

Meet Doink the English cocker spaniel, an on-site risk-mitigator at our Lloydminster Upgrader. Read more. amework

#### Incident & emergency management

Cenovus's focus is on keeping our people, communities and workplaces safe when an emergency situation occurs. Protecting life, stabilizing the incident and environmental stewardship are our priorities. If there is a significant incident<sup>1</sup>, we respond using the globally recognized Incident Command System (ICS), which helps Cenovus build trust and confidence with our external stakeholders and allows us to align with other response organizations.

The incident management process allows us to effectively and consistently respond to, investigate and learn from incidents at our worksites, in compliance with regulatory requirements in each of our operating areas. Through detailed investigations, the root cause is identified and corrective actions are developed to prevent recurrence. In 2022, improving the competency of our incident investigators was a key focus, including additional training on basic and advanced incident investigation techniques and ongoing coaching.

Using the COIMS framework, we prepare our response teams through planning, training and exercises. The emergency response plans for all locations are updated and exercised annually to ensure we have the appropriate people, resources and equipment in place. In 2022, the emergency management team completed an extensive training program, driving continuous improvement through exercises for all field and corporate response teams to help ensure we are prepared.

We also work with first responders, industry partners, communities and government agencies to enhance our capabilities, building our preparedness and response.



Tabletop exercises and live drills are just some of the ways our emergency management team helps ensure we are properly prepared for any emergency.

Read more about our commitment to emergency response preparation here.

#### **Business continuity**

Business continuity planning is designed to address various types of business interruptions. Our plans are updated annually to identify opportunities for improvement and to further develop enterprise resilience. We exercise each site and corporate function plan every year, which allows us to discuss risks and identify gaps.

#### Industrial hygiene & occupational health

Cenovus's industrial hygiene and occupational health programs protect our employees and contractors by identifying, assessing and controlling occupational health hazards.

Our industrial hygiene program includes ongoing surveillance, assessment and specific control procedures for our identified hazards. We have 22 hazard-specific programs within the Industrial Hygiene standard to control potential risks, including benzene exposure control, hearing conservation, respiratory protection and the management of silica, asbestos and chemicals. Site-specific plans and strategies are also in place. In 2022, our occupational health program included pre-employment health assessments for safety-sensitive positions, and periodic and exposure health assessments. Our corporate COVID-19 response team was stood down in 2022 following country, regional and local government guidance. As part of our business continuity practices, we continue to monitor for potential outbreaks.

#### 10 life saving rules

As part of Cenovus's commitment to providing a healthy and safe work environment, we are aligned with Energy Safety Canada's 10 life saving rules. These rules are mandatory for everyone who works at Cenovus.

#### Safety reports and dashboards

Reporting all potential and actual safety incidents is a critical component of Cenovus's learning culture. Internal health and safety staff, independent of operations, review and verify safety reports. Our operations integrity scorecard is a dashboard where we collect and analyze information about incidents and near miss investigations, hazard identification and mitigation, audits and inspections, behaviour observations and corrective actions. Staff can access, in real time, leading or lagging information on the safety performance of the business. The dashboard lets us visualize our health and safety performance, support safety audits and assurance work, notify leaders about events and analyze trends to drive continuous improvement. Cenovus management meets weekly to review our safety performance and what we've learned from any current incident investigations, and discuss areas for improvement.

1 An incident or near miss with an actual impact of greater than or equal to three on a scale of five (with one considered minor) and/or a potential risk of greater than or equal to high, as defined in the Cenovus risk matrix.

#### Supplier safety management

Suppliers are key to safe operations, so it is critical they commit to our safety requirements. Our supply chain and contractor safety management process defines the procedures, systems and tools used to manage onsite supplier safety performance. We minimize and manage risks by qualifying, managing and verifying our onsite suppliers, collecting information that helps us select vendors based on:

- Suppliers' own internal health and safety program quality.
- Supplier health and safety inspections and reviews conducted by Cenovus staff.
- Past safety performance with other oil and gas companies.
- Past safety performance on Cenovus sites.

Once selected, suppliers are monitored to ensure compliance with our standards. We use the ISNetworld (ISN) database to access information about suppliers, ensure base compliance with health and safety and environmental requirements, and provide transparent and timely updates to all suppliers.

#### NEXT GEN CONNECTIVITY

With our broad base of assets in several geographic areas, we're working to improve connectivity and enhance worker safety at all our sites, including a pilot at a northern Alberta oil sands facility and a project hundreds of kilometres offshore the Atlantic coast.

At our *SeaRose* floating production, storage and offloading (FPSO) vessel offshore Newfoundland and Labrador, we launched a pilot in November 2022 using low orbit satellites to ensure a reliable connection for our workers, improving network security, increasing productivity and, for workers who are on shift for three weeks at a time, providing a reliable connection to call home.

Another pilot is a 5G network at our Sunrise oil sands asset. This technology enables a standalone network to provide wireless connectivity that is faster, safer and more reliable, and has the ability to provide coverage across an entire industrial site. It has also improved network security.

Better connectivity has potential benefits both for innovation and enhanced safety in remote areas. Workers can remain connected going further into the field, have improved access to critical data and information, and may be able to reduce potentially dangerous work, for example, by using virtual reality headsets to do inspections, with operators remaining in a control room.



#### **2022 PERFORMANCE**

In 2022, Cenovus continued to establish a strong safety track record at our owned and operated facilities. We saw a 3% decrease in our TRIR compared with 2021, and our offshore teams in the Atlantic and Asia Pacific regions achieved zero recordable injuries. However, there is always room for improvement. Across the company Cenovus had 89 recordable injuries in 2022, up from 71 the year before. While the number of recordable injuries increased in 2022, our volume of work as a company increased, which means that our total recordable incident rate, which records incidents per 200,000 hours worked, decreased slightly. We never want to see anyone injured on the job and are continuing to build our safety culture. Incidents are thoroughly investigated to identify root causes and improvements so we can avoid repeat events. Investigations are evaluated to identify potential cross-company themes, and plans are put in place to address them.

Our process safety events remained flat, with 21 in 2022 and 20 in 2021. We continually look for ways to improve our process safety performance, focusing on safe control of work, risk management and management of change, supported by leadership in the field and learning from past incidents. In 2022, we successfully piloted safety training for a cohort of frontline leaders, which emphasized establishing a safety culture and encouraging conversations between leaders and field workers. We plan to roll out this program to frontline leaders in 2023 and 2024. As our company grows, including the acquisition of the Toledo Refinery completed in the first quarter of 2023, we are incorporating our evolving business profile into safety projections. Building on the work of external experts and our internal risk reviews, we are prioritizing spending on facility renewal projects at our manufacturing assets that provide the greatest opportunity to further improve the safety and reliability of our operations.



**Process safety events** are unplanned or uncontrolled releases of potentially hazardous liquid or gas from production facilities. Releases are evaluated and categorized into tiers in accordance with industry standards. **Recordable incidents** include lost time, restricted work and medical aid injuries.

#### SUPERIOR REBUILD

In the first half of 2023, the Superior Refinery in Superior, Wisconsin safely restarted. The refinery was rebuilt with enhanced safety equipment, incorporating advances in technology and efficiencies made across the refining industry, including:

- A new control system upgrade throughout the refinery to improve safety and operating performance through enhanced safety shutdowns and process control.
- New crude and fluid catalytic cracking process units which include enhanced safety measures, such as advanced technology and instrumentation to monitor performance in real-time and ensure the operations and engineering staff can carefully assess performance.
- A new power feed and power distribution centre to ensure stable power to the units and reduce the risks of refinery upsets due to power outages.
- New training materials that combine classroom and field training, along with directed training by subject matter experts.

As part of our comprehensive approach to safety we are implementing additional hydrogen fluoride technology and safety measures which include the ability to rapidly detect and mitigate a release through enhanced leak detection, additional emergency isolation valves that can quickly limit and isolate potential leaks if needed, and a new storage tank and rapid acid transfer system.



# 3 CLIMATE & GHG EMISSIONS

Cenovus is committed to helping ensure a reliable, affordable and secure global energy supply, and doing so in a more sustainable way. We're taking meaningful steps to reduce our GHG emissions as we build toward our long-term ambition of net zero emissions by 2050.

Oil will continue to be part of a diversified global energy mix through 2050 and beyond, both as a transportation fuel and the building block of products we use every day, such as smartphones, contact lenses and even key components of electric vehicles. To remain resilient, we must decarbonize our operations – and we are.



# **CLIMATE & GHG EMISSIONS PROGRESS**

#### TARGET AND NET ZERO AMBITION





#### 2022 KEY INITIATIVES

#### Methane reduction

Reduced absolute methane emissions in upstream operations by about 59% from 2019 levels.

- Continued focus on improved methane detection and quantification.
  - Completed 6,000 optical gas imaging (OGI) surveys since Jan. 1, 2020, including 1,881 in 2022.
  - Completed pilot of alternative Fugitive Emissions Management Program (alt-FEMP) aerial screening in conventional, heavy oil and oil sands, with potential to expand.
- Continued to execute instrument gas to air conversions and electrification.
- Piloted select methane reduction technologies including instrument gas to nitrogen conversion, methane-detecting robots and 3D mapping technology and upgrading several natural gas-powered engines to prevent incomplete combustion, or methane slip.

#### Carbon capture and storage (CCS) and other decarbonization

Continued to operate Lloydminster Ethanol Plant and Pikes Peak South carbon capture projects.

Progressed a number of additional potential carbon capture projects:

- Completed design and engineering studies to improve the capture efficiency and energy use, as well as other developments in carbon capture technologies at Christina Lake.
- Drilled appraisal well for proposed Minnedosa Ethanol Plant CCS project.
- Furthered understanding of Svante's solid adsorbent beds technology at Pikes Peak South carbon capture project, and completed feasibility studies for commercial-scale carbon capture applications at two Cenovus assets, working with Svante.
- Identified potential carbon capture technologies for further evaluation at Lloydminster Upgrader.

Signed a Power Purchase Agreement (PPA) to buy renewable electricity and associated emissions offsets from a wind project in southeast Alberta.

1 Target includes start year 2019 for emissions. Emissions reductions are in reference to scope 1 and 2, on a net equity basis.

3 This figure has been updated to align with the adjusted 2019 baseline, and to allow comparison, the adjusted 2022 emissions number assumes 100% ownership of Sunrise and Toledo and full operations at Superior for all of 2022.

<sup>2</sup> The absolute emissions target and 2019 baseline have been adjusted to reflect material asset changes, including acquisitions and divestitures, up to the end of the first quarter of 2023, to capture the Toledo transaction. We intend to continue using this approach of adjusting our emissions baseline to reflect material changes to our portfolio. Performance toward our target is then measured against this adjusted baseline.

### **CLIMATE & GHG EMISSIONS PROGRESS**

#### WHAT'S NEXT<sup>1</sup>

#### Methane reduction

- Progress milestone to reduce absolute methane emissions in our upstream operations by 80% by year-end 2028, from a 2019 baseline.
- Spend more than \$100 million between 2023-2027 to accelerate methane emissions reductions in the near term.
- Expand instrument gas to nitrogen conversion pilot to up to 40 sites, from one.
- Reduce emissions in Atlantic operations through offshore power and flare optimization.
- Continue to advance improvements in methane detection and quantification to improve the accuracy of our emissions reporting, including evaluating the expansion of alt-FEMP aerial screening.
- Pursue decarbonization opportunities through external collaboration with partners such as Clean Resource Innovation Network (CRIN) and Petroleum Technology Alliance Canada (PTAC).

#### CCS and other decarbonization

- Evaluate data from sequestration appraisal well drilled at Minnedosa Ethanol Plant and determine next steps.
- Advance CCS at the Lloydminster Upgrader, select sequestration well location and optimal CO<sub>2</sub> capture technology.
- Continue work with Svante and other technology providers for design and cost estimates on commercial-scale carbon capture applications.
- Collaborate with industry peers in accelerating emissions reduction technology commercialization.
- Advance Pathways Alliance foundational CCS network.
- Continue to progress renewable PPAs, which will be used to offset a portion of our scope 2 emissions.
- Continue to monitor advancements in non-combustion uses of bitumen (Bitumen Beyond Combustion).

1 Represents actions that Cenovus has taken or intends to take during the 12 months ending December 31, 2023

#### **GOVERNANCE**

- The Board approves our corporate strategic plans, which take into account opportunities and risks to our business, including those related to climate & GHG emissions.
   The Board delegates oversight of certain climate-related matters to each of the Audit and Safety, Sustainability and Reserves (SSR) Committees.
- GHG targets are factored into annual capital allocation planning and investment decision processes.
- Carbon compliance costs and GHG profile impacts are factored into acquisition and divestiture decisions.
- Progress towards our climate & GHG emissions target and net zero ambition is guided by the executive leadership team and overseen at the Board committee level.
- Climate & GHG performance is measured, reported and publicly disclosed annually in our ESG report.
- A climate & GHG performance metric is included in our annual corporate performance scorecard, which impacts compensation.

For a complete overview of our sustainability governance, refer to ESG Governance.

#### **STRATEGY**

If we decarbonize the Canadian barrel of oil, it should be the preferred global barrel. We expect Cenovus's core portfolio to remain hydrocarbon-focused, with continued investment in emissions reduction technologies. Our GHG reduction efforts and our long-term ambition of achieving net zero emissions by 2050 will help ensure Cenovus's business remains resilient and can continue to play an essential role as the world moves toward a decarbonized future.

Currently, the majority of Cenovus's emissions are in Canada, where climate change is a critical challenge for our industry as it is one of the country's largest  $CO_2$  emitters. Our industry has an important role in helping Canada achieve its Paris Agreement commitments and goal of net zero emissions by 2050. Cenovus's efforts to lower emissions are complemented by the work of the Pathways Alliance, which we jointly founded with our oil sands peers in 2021. The goal of the Pathways Alliance is to achieve net zero GHG emissions from

oil sands operations by 2050, by collaborating to deploy various emissions reduction technologies. With the restart of our Superior Refinery in Wisconsin and the completed acquisition and restart of the Toledo Refinery in Ohio in 2023, we are continuing to find opportunities to lower emissions associated with our expanded U.S. operations as well.

# Our plan to achieve our target and net zero ambition

We expect to spend approximately \$1 billion in our five-year business plan (2023-2027) on GHG emissions reduction opportunities, which will help us progress towards our target and net zero ambition.

Our decarbonization plan involves advancing and applying technologies in phases. Phase 1 (2023-2027) aligns with our five-year business plan and includes near-term projects as well as pilots and feasibility studies, including for small modular nuclear reactors for heat and power and next-generation carbon capture technology, which are expected to enable further reductions in Phase 2. The near-term projects with funding in our five-year plan include methane reduction and facilities optimization in our conventional and Atlantic businesses, and CCS initiatives at Christina Lake, Lloydminster Upgrader, Minnedosa Ethanol Plant and Elmworth gas plant.

Potential developments in Phase 2 (2028-2035) include achieving our methane reduction milestone, expanding carbon capture in downstream and oil sands assets, tying in to the Pathways foundational CCS network, and advancing low-carbon business opportunities.

If we decarbonize the Canadian barrel of oil, it should be the preferred global barrel. Phase 3 (beyond 2035) outlines the technologies we're pursuing to achieve our net zero by 2050 ambition. These initiatives include implementing the most efficient large-scale emissions reduction solutions, which could

involve further CCS and process improvements, the use of small modular nuclear reactors for heat and power, and other low-carbon energy inputs. This suite of long-term abatement levers requires additional technology improvements and government financial and regulatory support to become feasible. We intend to complement these initiatives by advancing measured growth in targeted low-carbon business opportunities.

Cenovus's planned path to achieving our net zero ambition includes the use of high-quality carbon offsets for only a small portion of hard-to-abate scope 1 direct emissions, while scope 2 emissions related to electricity purchases are expected to be largely mitigated through purchasing renewable power. Progressing GHG reduction initiatives in our business plan

~\$1 billion capital investment over next five years (2023-2027)

Continued decarbonization on our path to 2035 and 2050 Applying and advancing technologies to reduce absolute emissions

Phase 1 2023-2027	Phase 2 2028-2035	Phase 3 2036-2050
Carbon capture and storage (CCS) projects	Advancing projects for 2035 target	Technology pathways to net zero
Minnedosa Ethanol Plant	Future potential developments	Long-term vision
Elmworth gas plant	Achieve our methane reduction milestone	• Full implementation of most efficient large-scale
Pathways foundational pipeline and sequestration hub	Pathways Alliance initiatives including commissioning	emissions reductions solutions
Lloydminster Upgrader	foundational pipeline and sequestration hub	CCS or small modular nuclear reactors on remaining     accessible emissions streams
Christina Lake (phase 1)	Complete in-flight CCS projects at Lloydminster Upgrader     and Christina Lake	<ul> <li>Portfolio adjustments and low carbon business</li> </ul>
Energy efficiency and methane reductions	Additional CCS or new technologies at oil sands and	opportunities
Instrument gas to air conversions	downstream assets	
Facilities systems electrification	Portfolio adjustments and low carbon business	
Near-zero vent designs and vent reductions	opportunities	
Offshore power and flare optimization		·
Pilots / feasibility studies that enable future reductions		

- Small modular nuclear reactors (SMNR) for heat and power
- Next-generation carbon capture technology
- Advanced amines for natural gas combustion flue gas

#### CENOVUS ENERGY 2022 ENVIRONMENTAL, SOCIAL & GOVERNANCE REPORT | 23

#### Potential emissions reduction solutions: illustrative timelines

Implementing the kind of decarbonization projects required to lower emissions in the energy industry is a huge undertaking that requires a significant amount of up-front work.

The timelines depicted below are for illustrative purposes. The individual components could take longer than anticipated, and are subject to risks inherent in our business.

#### Illustrative CCS project timeline



#### Illustrative SMNR project timeline



- Feasibility (Design), Preparation (Regulatory), Stakeholder and community planning (Consultation)
- Detailed engineering & long-lead procurement (Design), Approval and licensing (Regulatory), Stakeholder and community engagement (Consultation)
- Construction and procurement
- Operations



#### PATHWAYS ALLIANCE

As a founding member of the Pathways Alliance, Cenovus is a strong supporter of the industry-wide effort to decarbonize production of Alberta's oil sands by 2050. The Pathways Alliance is a collaboration between the six largest oil sands operators representing approximately 95% of Canada's oil sands production. It has been working diligently with both the federal and provincial governments over the past couple of years to ensure a financial and regulatory model that supports decarbonization efforts to achieve net zero emissions by 2050. Its foundational project is a carbon capture and storage network that is intended to have the ability to link more than 20 oil sands operations through a transportation corridor to a deep underground storage hub in central Alberta. Phase 1 of the foundational project is set to be operational by 2030 and sequester more than 10 million tonnes of carbon annually from 14 facilities. Through the following decade more facilities are planned to be added as well as other industrial processes that produce carbon. Pathways Alliance continues to advance early work on dozens of other technologies on the path to net zero.

- Early engagement with more than 20 Indigenous communities along the proposed transportation and storage network corridor.
- Selected by the Government of Alberta to do exploratory work on the carbon storage hub, test wells have been drilled.

- Conducting engineering studies for the Phase 1 CO<sub>2</sub> capture facilities: twelve feasibility studies have been completed on oil sands sites with engineering work advancing.
- Completed pre-engineering work on the 400-kilometre pipeline to carry captured CO<sub>2</sub> to the storage hub; more detailed engineering work has begun.
- Environment field programs underway to support regulatory application submissions.

#### Other

- Working on more than 70 additional decarbonization technologies.
- Cenovus leading early work on the study of applying small modular nuclear reactors in the production of steam for oil extraction as well as the generation of electricity.

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





### **RISKS & OPPORTUNITIES**

#### Risks

We recognize there are increasing concerns about climate change, and potential risks our industry and operations may be exposed to. Climate risks are regularly reviewed and assessed for materiality by subject matter experts, Cenovus's executive leadership team and our Board, in addition to being reviewed as part of our annual enterprise risk management activities. Regular assessment ensures appropriate risk management priorities are established or updated, and focused action and mitigation measures are put in place.

The following table outlines a high-level summary of climate-related risks we face over the short (2023-2027), medium (2028-2035) and long (beyond 2035) terms. In alignment with the Task Force on Climate-related Financial Disclosures (TCFD) and Sustainability Accounting Standards Board (SASB), we identify our risks and demonstrate examples of our approach to mitigating them. The potential financial impacts of climate-related risks on our business include increased operating, capital and compliance costs, declining demand for our products, reduced access to capital, liquidity and/or insurance coverage, impact to our corporate credit rating, and lower market valuation, revenues or cash flows.

Refer to the Risk Management section for a detailed overview of managing climate risk, and to the "Risk Management and Risk Factors" section of our 2022 Management's Discussion and Analysis (MD&A) for a comprehensive description of climate-related transition and physical risks aligned with TCFD.

SeaRose FPSO, offshore Atlantic Canada 

TCFD RISK CATEGORY <sup>1</sup>	DESCRIPTION <sup>2</sup>		EXAMPLES OF RISK MANAGEMENT STRATEGIES <sup>3</sup>
Policy and legal	Decisions made by governments, regulators and courts of law in jurisdictions where we operate have the potential to negatively impact the execution of our business strategy and our financial condition, and cannot be accurately predicted at this time. Cenovus operates in several jurisdictions which are introducing increasingly stringent climate-related policies, including GHG emissions regulations.	•	Stress testing our corporate strategy to evaluate financial resilience against a variety of carbon price scenarios.
		•	Advancing policy dialogue with stakeholders and government and advocating for effective policy that provides a balance between environmental, economic and social outcomes.
		•	Participating in the Pathways initiative to work collectively with the federal and Alberta governments, with the ambition of achieving net zero GHG emissions from the companies' oil sands production by 2050 to help Canada meet its climate goals, including its Paris Agreement commitments and 2050 net zero aspirations.
		•	Maintaining our low cost structure and leveraging our best-in-class reservoirs and leading oil sands emissions performance.
		•	Advancing plans to achieve Cenovus's climate & GHG emissions target and 2050 net zero ambition.
		•	Meeting and at times exceeding stringent regulatory requirements in jurisdictions where we operate.
		•	Advocating for regulations that incentivize decarbonization throughout the value chain, while maintaining our sector's competitiveness.
Technology	We depend on, among other things, the availability and scalability of existing and emerging technologies to meet our business goals, including our climate and GHG emissions target and ambition. Limitations related to the development, adoption and success of these technologies or the development of disruptive technologies could have a negative impact on our long-term business resilience.	•	Focusing on technology development, collaboration and innovation to find both incremental and potentially game-changing solutions to reduce the GHG emissions and costs associated with our production.
		•	Partnering with other industries, organizations, academic institutions, scientists and entrepreneurs to find and develop innovative solutions and accelerate the pace of environmental performance improvements.
		•	Leveraging the Pathways Alliance and potential government support to share investment/ costs in clean energy technologies and infrastructure.

1 This table has been adapted and customized from TCFD.

2 For the purposes of this report, the description of ESG risks related to our business described herein have been summarized, or otherwise derived, from the fulsome risk factors set out under the "Risk Management and Risk Factors" section of our 2022 annual MD&A and the risk factors described in other documents Cenovus files from time to time with securities regulatory authorities. Readers are directed to such documents for a full discussion of Cenovus's material risk factors, assumptions and uncertainties.

3 These are examples and are not an exhaustive list of Cenovus's risk management strategies.

TCFD RISK CATEGORY <sup>1</sup>	DESCRIPTION <sup>2</sup>	EXAMPLES OF RISK MANAGEMENT STRATEGIES <sup>3</sup>
Market – Supply and demand, and commodity prices	Increasing focus on the timing and pace of the transition to a decarbonized economy and resulting trends will likely affect global energy demand and use, including the types of energy generally used by industry and individual consumers. Under certain aggressive low-carbon scenarios, potential demand erosion could contribute to commodity price fluctuations and structural commodity price declines. Medium and long-term demand destruction could be driven by factors such as the ability to conceptualize, develop, commercialize and distribute adequate supplies of alternative energy. Other factors potentially impeding supply and demand include technology development and adaptation, energy consumption patterns, global growth, industrial activity and weather patterns, and climate conditions.	<ul> <li>Stress testing our corporate strategy to evaluate financial resilience against a variety of demand and carbon price scenarios, including an aggressive low-carbon scenario.</li> <li>Maintaining our low cost structure and an asset portfolio that allows us to remain resilient and sustainable through the commodity price cycle and as the energy mix diversifies.</li> <li>Focusing on technology development, collaboration and innovation to find both incremental and potentially game-changing solutions to reduce GHG emissions and costs associated with our production.</li> <li>Advancing measured growth in targeted low-carbon business opportunities.</li> </ul>
Market – Access to physical markets	Opposition to new and expanded pipeline projects have been influenced by, among other things, concerns about GHG emissions associated with oil development and end-use combustion of fuels. Additional concerns about pipeline spills can create opposition to pipeline projects at a local level. The inability of Cenovus to optimize market access for either the delivery of our production or refining feedstock may impair margins and reduce cash flows.	<ul> <li>Advocating for improved market access that could position Canadian oil producers, including Cenovus, to become global suppliers of choice for responsibly produced oil and displace oil from jurisdictions with less stringent environmental standards and less transparency.</li> <li>Maintaining operational integration across the Cenovus value chain to provide optionality.</li> <li>Increasing long-term optionality through diversification of pipeline commitments, crude-by-rail and marine programs.</li> <li>Investing in low-carbon intensity offshore assets that are not subject to market access constraints prevalent in Western Canada.</li> <li>Evaluating potential to build a diluent recovery unit and exploring partial upgrading.</li> </ul>

TCFD RISK CATEGORY <sup>1</sup>	DESCRIPTION <sup>2</sup>	EXAMPLES OF RISK MANAGEMENT STRATEGIES <sup>3</sup>
Market – Access to capital	The mandates of institutional investors, credit rating agencies, lenders and/ or insurers are evolving to increase consideration of ESG matters – GHG emissions performance in particular. This could affect Cenovus's ability to access capital and secure adequate or prudent insurance coverage or may increase the cost to do so. The future development of our business may be dependent upon our ability to obtain additional capital, including debt and equity financing.	<ul> <li>Maintaining a strong balance sheet and ensuring we have access to multiple sources of capital.</li> <li>Engaging with our investors, lenders, rating agencies and insurers to address concerns and understand mandates.</li> <li>Ensuring reporting transparency, including following the recommendations of TCFD.</li> <li>Embedding ESG targets, including GHG reduction goals, into our business plans, compensation and capital allocation decisions.</li> </ul>
Reputation	Development of fossil fuels, including the Alberta oil sands, has received considerable negative attention related to environmental impact, climate change, GHG emissions and Indigenous engagement. We rely on our reputation to build and maintain positive relationships with investors and other stakeholders, to recruit and retain staff, and to be a credible, trusted company. Damage to our reputation could lead to constrained access to insurance, liquidity and capital, and changes in demand for our products, which may adversely impact our business, financial condition or results of operations.	<ul> <li>Continuing advocacy efforts to help Canadian oil producers, including Cenovus, be recognized as global suppliers of choice for responsibly produced oil.</li> <li>Upholding our core values and Sustainability Policy.</li> <li>Building and maintaining positive and mutually beneficial relationships with local communities, including Indigenous communities.</li> <li>Maintaining a commitment to transparent ESG disclosure including progress on plans to achieve our targets and net zero ambition.</li> <li>Responsibly developing oil and natural gas in a safer, innovative and efficient way.</li> </ul>

TCFD RISK CATEGORY <sup>1</sup>	DESCRIPTION <sup>2</sup>	EXAMPLES OF RISK MANAGEMENT STRATEGIES <sup>3</sup>
Acute physical climate risk	Cenovus's exploration, construction and production operations, and the operations of major customers and suppliers, can be affected by floods, forest fires, earthquakes, hurricanes, typhoons and other extreme weather or natural disasters. Climate change may increase the frequency of severe weather conditions, which may impact our business and financial results. Climate change may also contribute to the melting of northern ice, increasing the creation of icebergs. Icebergs off the coast of Newfoundland and Labrador may threaten Atlantic oil production facilities, result in spills, damage assets or disrupt production.	<ul> <li>Engineering our facilities and equipment to withstand extreme weather.</li> <li>Maintaining our policies and programs to protect people, equipment and the environment in the event of extreme weather conditions.</li> <li>Maintaining a robust ice management program for our Atlantic operations.</li> <li>Maintaining robust typhoon plans for our Asia Pacific operations in coordination with business partners.</li> <li>Maintaining up-to-date emergency response plans and conducting regular emergency management exercises.</li> <li>Maintaining a comprehensive insurance program.</li> </ul>
Chronic physical climate risk	Our exploration and production activities are subject to chronic physical risks such as a shorter timeframe for our winter drilling program, changes in water tables and reduced access to water due to drought conditions. A systemic change in temperature or precipitation patterns could result in more challenging conditions for the construction of ice roads, execution of our winter drilling program and reclamation activities.	<ul> <li>Implementing similar risk management strategies as for acute physical climate risk.</li> <li>Using technology to access remote locations and conduct year-round reclamation activities.</li> <li>Reducing our fresh water requirements and developing water management plans for all our operated assets.</li> </ul>

#### **Opportunities**

We continue to enhance our plans to optimize our heavy oil value chain, while reducing emissions and costs, and increasing product value. We believe this will help position us to remain resilient in a world of energy diversification and rising GHG emissions compliance costs. In the table that follows, we've identified ESG-related opportunities based on Cenovus's current strategic position. Seizing these opportunities could result in potential financial benefits such as reduced operating costs through efficiency gains, increased production capacity, improved market access, higher revenues and cash flows, increased value of fixed assets, rising market valuation, lower compliance costs or greater access to capital, improved liquidity, corporate credit ratings and/or insurance coverage.

OPPORTUNITY & EXAMPLES OF POTENTIAL BENEFITS <sup>1</sup>	EXAMPLES OF CENOVUS'S ACTIONS <sup>2</sup>
Resource efficiency Potential to improve efficiencies across our operations and contribute to global efforts to curb emissions and reduce environmental impact while also achieving direct cost savings over the medium to long term.	<ul> <li>Maintaining an industry leading steam-oil ratio (SOR) in the oil sands; consistently applying Cenovus's oil sands operating practices across the thermal portfolio.</li> <li>Testing steam-assisted gravity drainage (SAGD) enhancement technologies, such as solvents, to improve performance and reduce costs while limiting our environmental impacts.</li> <li>Collaborating with industry peers to improve environmental performance and reduce operating costs by developing new technologies.</li> <li>Generating offsets and emissions performance credits through energy efficiency and emissions reduction activities under government regulations.</li> </ul>
<b>Energy source</b> Opportunity to shift toward low-emission energy sources could potentially save on annual energy costs while also lowering overall emissions.	<ul> <li>Using cogeneration at our Foster Creek, Christina Lake, Lloydminster Upgrader, Lloydminster Ethanol Plant and Rainbow Lake facilities.</li> <li>Transitioning from natural gas-driven pneumatic devices to solar or grid-powered electrical chemical injection pumps where feasible.</li> <li>Entering into PPAs for wind and solar-powered electricity and the associated emissions offsets.</li> <li>Using electricity from the grid instead of diesel engines to power drilling rigs at our oil sands sites.</li> <li>Evaluating the potential for using solar energy with our joint venture partners at our Asia Pacific operations.</li> </ul>

1 These are examples and not an exhaustive list of Cenovus's opportunities or benefits.

2 These are examples and not an exhaustive list of Cenovus's actions.

OPPORTUNITY & EXAMPLES OF POTENTIAL BENEFITS <sup>1</sup>	EXAMPLES OF CENOVUS'S ACTIONS <sup>2</sup>
<b>Products and services</b> Opportunity to develop lower-emission products and services may improve our competitive position and capitalize on	• Actively collaborating with other industries, organizations, academic institutions, scientists and entrepreneurs to find innovative solutions and develop sustainability initiatives.
	• Leveraging Pathways Alliance and potential government support to invest in low-carbon and carbon capture technologies and infrastructure.
	• Producing lower-carbon products such as natural gas, asphalt and low-carbon ethanol.
and reduce environmental impact.	• Producing corn oil, which is used to make renewable diesel, at our Minnedosa Ethanol Plant.
	• Working with partners to advance technology development of non-combustion bitumen products (Bitumen Beyond Combustion).
	• Exploring small modular nuclear reactors as a source of low-emission heat and power for our assets.
	Advancing measured growth in targeted low-carbon business opportunities.
Markets	• Using cogeneration at our Foster Creek, Christina Lake, Lloydminster Upgrader, Lloydminster Ethanol Plant and Rainbow Lake facilities.
Opportunities in new markets or types	• Entering into PPAs for wind and solar power produced electricity and the associated emissions offsets.
of assets may assist Cenovus in being	• Advocating for improved market access to become global supplier of choice for responsibly produced oil.
lower-carbon economy.	• Investing in low-carbon intensity offshore assets that produce natural gas and natural gas liquids in Asia Pacific and light oil in Atlantic Canada.
	• Leveraging Pathways Alliance and potential government support to invest in low-carbon and carbon capture technologies and infrastructure.
	• Exploring additional opportunities in alternative end-use markets, including biofuels and asphalt.
Resilience	• Maintaining an asset portfolio that allows us to remain resilient and sustainable through the commodity price cycle and as the energy mix diversifies.
adaptive capacity to respond to climate change and allow us to be better	• Employing the right business model and people to achieve our climate and GHG emissions target and ambition while maintaining focus on our low cost structure, generating free funds flow and growing shareholder returns.
positioned to thrive in a lower-carbon economy.	• Focusing on technology development, collaboration and innovation to find both incremental and potentially game-changing solutions to reduce the GHG emissions and costs associated with our production.
	• Evaluating our ability to capitalize on emission reduction opportunities with our joint venture partners in the United States, as a result of the incentives associated with the <i>Inflation Reduction Act</i> .

#### Scenario analysis

#### Scenario development

In 2021, Cenovus developed internal energy diversification scenarios to test the resiliency of our business and strategy and help inform decision-making. In early 2023, we re-evaluated our internal scenarios and determined they remain relevant for such purposes.

These scenarios consider several variables, such as the supply and demand outlook for crude oil and other forms of energy, electric vehicle (EV) penetration rates, transportation infrastructure, behavioural changes, technological availability and climate policies in various regions around the world. In particular, in developing these energy diversification scenarios, we applied two carbon pricing scenarios:

- A base carbon policy case which assumes future federal and provincial carbon policies reflect those in effect at the time of analysis (first quarter of 2023).
- A Paris-aligned scenario, which would see more stringent emissions allocation benchmarks and higher carbon compliance costs in certain jurisdictions.

For Canadian assets, the base case has a carbon price escalating from \$65/tonne in 2023 and reaching \$170/tonne in 2030. The Paris-aligned case continues to escalate after 2030 until it reaches \$300/tonne and stays flat from 2039 onward. For non-Canadian assets, our global carbon policy assumptions reflect current policies in relevant jurisdictions. We have also layered in varying cost of capital ranges, with an expectation that capital would become more expensive and difficult to access in the more aggressive diversification scenarios. Based on the key inputs, we have three long-range energy diversification scenarios, which we believe capture a realistic range of potential outcomes:

#### **REFERENCE CASE**

In this scenario, we continue to see crude demand growth into the mid-2030s with a gradual plateau and decline in the early 2040s. Carbon policies reflect the base carbon policy case.

#### ACCELERATED DIVERSIFICATION

In this scenario, there is an increase in vehicle efficiencies and EV penetration. Carbon policies reflect the Paris-aligned scenario. These factors result in restrained long-term petroleum demand growth potential.

#### AGGRESSIVE DIVERSIFICATION

In this two degree-aligned scenario, there is an accelerated pace of crude demand destruction, with heavy oil and refined product demand reaching a plateau in the mid 2030s and declining thereafter. Carbon policies reflect the Paris-aligned scenario.

Forecast global oil demand under all of these scenarios fits within a diverse range of third-party forecasts. The commodity pricing assumptions underpinning Cenovus's aggressive diversification scenario are lower than those embedded in the International Energy Agency's Sustainable Development scenario as well as S&P Global Commodity Insights' (formerly IHS Markit) Green Rules scenario, which are both aligned with the Paris Agreement.

#### CLIMATE-RELATED SCENARIO ANALYSIS

The purpose of climate-related scenario analysis is to better understand how a business might perform under different future states. Scenarios allow an organization to develop an understanding of how the physical and transition risks and opportunities of climate change might plausibly impact the business over time and consider potential strategic responses.

What is a scenario?

- A scenario describes a path of development leading to a particular outcome.
- Scenarios are not intended to represent a full description of the future, but rather to highlight central elements of a possible future and to draw attention to the key factors that will drive future developments.
- They are hypothetical constructs, not forecasts, predictions or sensitivity analyses.

#### Source: TCFD

As such, scenario analysis should not, in any way, be construed as an expected future outcome of Cenovus's business, or as providing an indication of the expected results of Cenovus's operations.



#### Testing our resilience

We have evaluated how our current portfolio performs under Cenovus's energy diversification scenarios in order to understand the key risks to the business as well as the actions and opportunities available to the company.

The results of our analysis reinforce our belief that our business plan positions us to remain resilient and generate significant free funds flow over the coming decades under the majority of Cenovus's energy diversification scenarios. A combination of aggressive demand destruction and materially increased carbon costs could have the potential to adversely affect our ability to generate free funds flow within the later timeframe of our analysis. However, in the event our current business model is faced with more accelerated constraints, we would make strategic decisions to ensure we are well positioned to remain resilient in this particular type of scenario.

In all scenarios, we will focus on optimizing our business while continuing to reduce emissions and costs, and increase product value. Commodity prices have the greatest impact to Cenovus's business and are the most significant driver of our ability to generate free funds flow. As part of our disciplined approach to capital allocation, we will continue to evaluate all opportunities based on a US\$45 per barrel West Texas Intermediate price. We believe this approach positions us to be financially resilient in a low commodity price environment that is consistent with a more aggressive energy diversification scenario. In addition, our low-cost and long-life reserves are expected to help us remain a global supplier of choice in a highly competitive, lower-carbon economy. We believe that by continuing to produce our resources responsibly and reduce emissions, Cenovus is well prepared to help meet the world's demand for the affordable, reliable energy needed for transportation fuel and as a building block for products we use every day. We will continue to explore key strategic initiatives to further strengthen and diversify our business model over time, and remain nimble as our views on policy, markets and technology evolve. Any decisions to further diversify or shift the focus of our asset portfolio would be weighed against, among other things, existing opportunities to maximize shareholder value. These opportunities are thoroughly researched and analyzed, and subsequently reviewed by the Board to ensure we have the relevant competencies to remain competitive.

#### Signposts

One of the ways we assess future risks to Cenovus, including the financial implications of climate-related risks, is through ongoing monitoring of signposts that are relevant to maintaining our competitiveness under a future lower-carbon scenario. Monitoring these signposts helps guide our decision making around which scenarios would be most likely to materialize as we continue to evaluate our strategy and identify new opportunities. We update and refine our perspective based on identified trends, conversations with investors and assessment of the overall business, policy, economic, social and technology environment.

The key signposts we monitor include:

- Global oil and gas fundamentals
  - Changes in supply or consumption and consumer behaviour
- Transportation efficiencies
  - Internal combustion engine vehicle mileage efficiencies and fleet turnover
  - Battery technology
  - Research and development investment by automakers
  - Supply chain: car and battery manufacturing
- International carbon policies
  - Net zero emission policy adoption and supporting efforts
  - ◊ GHG climate policies/regulations
- Advances in other energy technologies
  - Cost and feasibility of emerging technology (CCS, hydrogen, nuclear)
  - ◊ Renewable projects growth
  - Efficiency gains in industrial/residential technology



#### **METRICS & TARGETS**

Achieving a 35% reduction in our absolute scope 1 and 2 GHG emissions, on a net equity basis, means reducing our emissions to 16.9 million tonnes<sup>1</sup> of  $CO_2$  equivalent ( $CO_2e$ ) from our starting point of 26.0 million tonnes<sup>1</sup> – a total reduction of 9.1 million tonnes through 2035.

Setting a target on our net equity emissions ensures we are focused on reducing our carbon footprint for all our business activities, not just those we operate.

#### SCOPE 1, 2 AND 3 REPORTING

We report our scope 1 and 2 emissions on both a gross operated and, to support our GHG reduction target, net equity basis. Scope 1 and 2 GHG emissions on a net equity basis include our working interest in all assets, including non-operated assets identified in the Reportable Segments section of this report. We disclose estimated scope 3 GHG emissions for our operations on a net equity basis using global guidance from Ipieca and the GHG Protocol.

#### OUR CLIMATE & GHG EMISSIONS TARGET AND AMBITION

Reduce absolute scope 1 and 2 GHG emissions, on a net equity basis, by

35% from 2019 levels by year-end 2035, as we build toward our long-term ambition for **net zero** 

emissions by 2050.



#### **2022 PERFORMANCE**

In 2022, our net equity scope 1 and 2 absolute emissions were lower than the prior year, largely due to the sale of our Tucker thermal asset. In addition, we reduced absolute methane emissions in our upstream operations by 32% from 2021 levels. While we have progressed a number of initiatives, they are focused on future emissions reductions. We continued to operate our two existing carbon capture projects, build on our methane emissions reduction efforts, and advanced several emissions reduction pilot projects and feasibility studies as part of overall efforts to decarbonize our portfolio and progress towards our target and net zero ambition.

Our GHG investment appraisal manual guides our emissions forecasting and evaluation of investment opportunities that could change our GHG profile. This standardizes our approach, allowing staff to quantify the expected impact of carbon pricing and credit generating opportunities in a consistent way. This manual was used to evaluate all major capital projects in 2022, and is fully integrated into our 2023 budget and long-range planning process.

Our internal carbon dashboard allows emissions to be tracked across the company. The dashboard breaks down our emissions in several ways, such as by asset and source, identified at the equipment level. We continue to enhance the functionality and accessibility of the dashboard, including the ability to break down data at both an operated and working interest level.

1 The absolute emissions target and 2019 baseline have been adjusted to reflect material asset changes, including acquisitions and divestitures, up to the end of the first quarter of 2023, to capture the Toledo transaction. We intend to continue using this approach of adjusting our emissions baseline to reflect material changes to our portfolio. Performance toward our target is then measured against this adjusted baseline.
# **Methane reductions**

# METHANE MILESTONE

We have a milestone to reduce absolute methane emissions in our upstream operations by 80% by yearend 2028, from a 2019 baseline. This is a key milestone towards our target to reduce absolute GHG emissions 35% by year-end 2035 as we build toward our net zero ambition. Our upstream operations represent over 90% of our methane emissions.

#### METHANE REDUCTIONS

We deploy methane reduction efforts primarily at our conventional gas and heavy oil operations, as our oil sands assets produce minimal methane emissions. Our oil sands operations are all SAGD, so we do not have any tailings ponds, which are typically the larger methane sources in mining oil sands operations.

Methane is an area where we are focused on achieving near-term emissions reductions. Between 2019 and 2022 we reduced absolute methane emissions in our upstream portfolio by approximately 59%, including a 494,000 tonne reduction in 2022 alone.

While we've made good progress, we know we can take further action on methane. Our internal Methane Challenge Team brings together teams from different business units and has developed a plan to help achieve near-term reductions which includes prioritizing a significant inventory of abatement projects across our upstream operations.

We've also allocated more than \$100 million in our five-year business plan to support methane reduction activity, including prioritizing facility systems electrification and non-vent solar powered chemical injection pumps, which replace natural gas-powered pneumatic equipment that vents methane. We're implementing routine vent reductions on sources such as tanks, casing vents or compressor seals, which involves different approaches including operational changes to eliminate venting, and installing equipment to capture or control the vent source.

These efforts will build on the methane work we've already done, including new facility design standards that helped us achieve ultra-low or no-emission footprints by eliminating vented methane emissions from natural gas-driven pneumatic equipment at new conventional well sites.

We continue to focus on detection and quantification to improve the accuracy and reliability of data to address the largest emission sources faster. In 2022, we continued to manage fugitive emissions at the ground level, through facility inspections using optical gas imaging (OGI) cameras to pinpoint leaks. Since January 2020, we've completed 6,000 site surveys, including 1,881 inspections in 2022. Our alt-FEMP pilot, or monitoring efforts from above, involved flying over our operations and obtaining "snapshots" detailed enough to show the size and location of any methane leaks, enabling us to prioritize emissions reduction efforts. The alt-FEMP pilot wrapped up at the end of 2022 and we are evaluating expanding the program in 2023. We reduced absolute methane emissions in upstream operations by approximately

**59%** between 2019 and 2022.

We've completed **6,000** OGI site surveys since January 2020.

We've allocated more than \$100 million in our five-year business plan to support methane reduction activity.

 Instrument gas to nitrogen conversion methane reduction pilot project. Elmworth, AB We actively participate in innovation networks, working with innovators, academic institutions, governments, regulators and other industry peers to move new ideas and technologies forward to address methane emissions.

On the technology front, in 2022 we launched a pilot in our conventional operations replacing instrument gas, which is high in methane, with pressurized nitrogen for our pneumatically powered control systems and chemical injection pumps, eliminating methane venting. We have plans to expand this pilot to up to 40 sites in 2023. Another short-term pilot in December 2022 involved deploying methane-mapping autonomous robots and handheld sensors at our *SeaRose* FPSO vessel in our Atlantic operations.



#### Our emissions reduction performance





#### Gross operated scope 1 & 2 emissions



We are reporting our scope 1 and 2 emissions on both a gross operated and, to support our GHG reduction target and ambition, net equity basis.

#### Gross operated scope 1 emissions by source 2022





The project tested new technologies for mapping methane emissions using 3D models generated from photographs and laser scans, and trialed the use of two types of robots for potential future applications. Additionally, we trialed an upgrade of several natural gas-powered engines to prevent incomplete combustion, commonly called "methane slip". These engines are primarily used to power gas compressors to move natural gas from the field to sales facilities, and several engines in our fleet could benefit from applying the results of the trial if it proves successful.



#### CARBON CAPTURE PROJECTS

# Our operated and in-progress carbon capture projects:

$tCO_2$ /year
~80,000
~9,000
~89,000
tCO <sub>2</sub> /year
~1,500,000
~100,000
~60,000
~600,000
~2,260,000
Total tCO <sub>2</sub> /year:
~2,349,000
_

# CCS and other decarbonization

We currently operate two carbon capture projects, which are designed to have the capacity to capture approximately 89,000 tonnes of CO<sub>2</sub> per year.

# Lloydminster Ethanol Plant

Our Lloydminster Ethanol Plant in Saskatchewan, where we produce fuel-grade ethanol, has the capacity to capture approximately 80,000 tonnes of  $CO_2$  per year, which is then injected underground for enhanced oil recovery. With the use of carbon capture technology, we produce some of the lowest carbon intensity ethanol in Canada. The facility, along with our ethanol plant in Manitoba, also helps address scope 3 end-use emissions as fuel blended with ethanol has lower emissions when burned compared with gasoline. In 2022, we captured approximately 62,000 tonnes of  $CO_2$ , as the plant underwent a scheduled turnaround, as well as other routine maintenance.

# **Pikes Peak South**

At our Pikes Peak South thermal asset in Saskatchewan, we are testing technology developed by Vancouver-based clean tech company Svante, which has the capacity to capture close to 9,000 tonnes of carbon a year at this asset while enabling the advancement of the technology. Svante developed, constructed and has been testing its novel structured adsorbent bed technology at our operations since 2019 and uses the performance data to improve the technology for commercial deployment. The technology takes flue gas from boiler exhaust stacks and exports it to a carbon capture system. Specially engineered filters grab on to the  $CO_2$ , isolating it from other gases so it can be safely produced in a concentrated form for controlled use. In 2022, we focused on understanding the long-term stability and operation of the solid adsorbent beds. This involved intentionally operating the capture process at below design capacity to understand how the beds degrade.

In 2022, working with Svante, we completed design and cost estimates for commercial-scale applications at two additional Cenovus assets. In 2023, we are doing techno-economic analyses of this technology against other carbon capture processes.

We're progressing a number of additional potential carbon capture projects intended to help us further decarbonize our portfolio:

# **Christina Lake**

In 2022, we completed design and engineering studies to improve the capture efficiency and energy use, as well as other developments in carbon capture technologies for our Christina Lake carbon capture project. The project, as the first phase of carbon capture at our Christina Lake oil sands asset, is sized to abate approximately 50% of the SAGD steam generators' current scope 1 emissions, or about 1.5 megatonnes abated per year.

As we are aligning our project with the Pathways CO<sub>2</sub> trunkline and storage hub availability, we don't anticipate carbon capture to be operational at Christina Lake until closer to 2030.

# Minnedosa Ethanol Plant

A proposed carbon capture project at our Minnedosa Ethanol Plant is designed to have the capacity to capture more than 100,000 tonnes of emissions per year. Captured  $CO_2$  would be transported to an offsite injection well for sequestration. In 2022, as part of phase one of the project, we drilled an appraisal well to help us understand the reservoir quality for sequestration. We continue to evaluate the data and are planning additional testing in 2023 to help determine next steps.

# Elmworth gas plant

Work is advancing to reduce emissions associated with the Elmworth gas plant in northwestern Alberta through a CCS project that would sequester up to 60,000 tonnes of  $CO_2$  annually, based on current design specifications. In 2022, we evaluated a potential reservoir to safely inject  $CO_2$ underground for enhanced oil recovery and the team is progressing preliminary engineering for the surface facilities. The project is included in our five-year plan.

# Lloydminster Upgrader

We continue to assess a potential carbon capture project at the Lloydminster Upgrader's steam methane reformer. Following a screening study done in 2021, we have identified select technologies for further evaluation. We are also actively evaluating the geology and studying the best place to store  $CO_2$  near the upgrader. Based on current design specifications, the upgrader project is expected to abate about 600,000 tonnes of  $CO_2$  per year.

# Additional decarbonization efforts

Additional decarbonization efforts will be required to help us reach our GHG emissions reduction target and ambition.

# **Power Purchase Agreements**

In 2022, we signed a PPA to buy renewable electricity and associated emissions offsets from a wind project in southeast Alberta. The PPA is expected to generate 633,000 megawatt hours annually and we intend to use the credits generated by this project to offset a portion of our scope 2 emissions. The PPA is set to start 12 months after the wind farm becomes operational, expected in early 2024.

We are an active participant in the renewable PPA market and intend to continue to add to our portfolio of renewable PPAs with the intention of fully offsetting our scope 2 (electricity related) emissions. We are focused on procuring a blend of renewable sources located in jurisdictions in or near our operations.

# Cogeneration

Our Foster Creek and Christina Lake oil sands facilities have cogeneration plants which use natural gas to power a combustion turbine, generating electricity for our operations. In 2022, our cogeneration plants produced 60 megawatt hours more electricity per day than we consumed, which we sold to the Alberta electrical grid, reducing the province's reliance on more carbon-intensive power. The gas-fired Meridian cogeneration station, which we operate, produces steam for our Lloydminster Upgrader and Lloydminster Ethanol Plant, and supplies electricity to the Saskatchewan grid under contract to SaskPower. These cogeneration plants help reduce the provinces' use of electricity produced using coal and reduces the emissions we would emit if we produced the steam from a conventional boiler system. We also have 50% ownership in a cogeneration facility at our Rainbow Lake asset where we use the steam and power, and excess electricity is sold to the Alberta grid.

### **Reservoir optimization**

We continuously work to maximize the use of available steam and increase production from reservoirs, aiming to maintain or lower our SOR. In 2022, efforts to achieve this, along with new pad development, included well stimulations, redevelopment wells (leveraging heat already in the ground to produce bitumen), pump placements and continued implementation of non-condensable gas injection in the reservoirs to maintain pressure and free up steam to develop new resource.

### **Solvents**

The use of solvents, which are lighter hydrocarbons, to displace steam at our oil sands and thermal operations has the potential to significantly reduce per barrel emissions. We have operated a number of pilots at varying solvent concentrations and are currently evaluating potential commercial deployment.



# REDUCING EMISSIONS IN OUR ATLANTIC OPERATIONS

We've been working to continue reducing emissions at our *SeaRose* FPSO vessel, located 350 kilometres offshore St. John's, Newfoundland and Labrador. Efforts include a Fugitive Emissions Management Program (FEMP), which uses specialized equipment to help detect fugitive emissions so we can prioritize repairs. In the last several years, we've been focused on reducing flaring. Between 2016 and 2018, flaring accounted for about 35% of total emissions, which was reduced to 25% between 2019 and 2021.

In 2022, our Atlantic region launched a GHG dashboard for *SeaRose*, which provides real-time information about all of the vessel's CO<sub>2</sub>e emissions and provides information about how operational changes impact performance and emissions. The region also implemented emissions.AI, which uses artificial intelligence to identify operational inefficiencies and opportunities for emission reductions.

# Voluntary carbon credits

In 2022, we entered into an agreement that will support improved forest management practices on Canada's West Coast. Our support will help the BigCoast Forest Climate initiative defer the harvesting of 100,000 acres of private land in coastal British Columbia for 25 years and potentially longer. The 50,000 tonnes of voluntary carbon credits associated with our agreement are equivalent to several years of Cenovus's corporate travel and employee commuting emissions, which represent a portion of our scope 3 emissions footprint.

# Scope 3

Scope 3 emissions are the indirect emissions in a company's value chain that are not included within scope 2 emissions. Because about 80% of emissions from fossil fuels are generated when the products are consumed, scope 3 emissions provide the most significant opportunity to address climate change globally.

To achieve the goals of the Paris Agreement, society must address emissions from initial production to final consumption. Significant progress on reducing those emissions will require collaboration across sectors, academia, governments, researchers, entrepreneurs and others. We participate in a number of collaborative opportunities to find solutions to address emissions from the use of our products, such as the NRG COSIA Carbon X Prize, which challenged teams to come up with useful products made from captured  $CO_2$ , and CRIN, which has a mandate to focus on solutions for clean hydrocarbons from source to end-use. Reaching Canada's ambitious decarbonization goals will not only require changes to the way people use energy, it will also require development of low-carbon, reliable and affordable energy resources. By developing low and zero emitting products, we have an opportunity to reduce scope 3 emissions. As an example, by transforming our heavy oil into products that are not combusted, like asphalt, our scope 3 emissions are lower than they would be if the heavy oil was refined into energy products like gasoline, diesel and jet fuel.

The criteria for identifying and reporting scope 1 and 2 emissions is well established, transparent and consistent across industries. However, because reporting scope 3 includes indirect emissions resulting from activities that occur outside our control, it is less certain and less consistent. Evaluating scope 3 emissions and comparing them between companies can be challenging due to inconsistent reporting methodologies and the risk of potential double counting. The majority of Cenovus's indirect scope 3 emissions are captured as direct emissions by entities under the national GHG inventory of the country where the end-use occurs. For Cenovus products this is predominantly in the U.S.



At our Asia Pacific operations, we are participating in a large-scale project with our partner that will generate solar energy at the China National Offshore Oil Corporation (CNOOC) Limited-operated Gaolan gas terminal.

Read more about the project here.

We disclose estimated scope 3 GHG emissions for our operations on a net equity basis using global guidance from Ipieca<sup>1</sup> and the GHG Protocol. As a fully integrated operator with upstream, downstream and retail operations, Cenovus has estimated scope 3 emissions for all three Category 11 methods. These are not additive. Category 11, the use of sold products, is the most material, with guidance to account for products at the point of extraction, processing or sales. Each method represents a unique estimation method using different boundary conditions. Disclosing these three methods under category 11 enables better comparison of the scope 3 emissions of our business to other oil and gas companies that may be integrated, upstream focused or downstream players, as well as across other sectors. Variance in our year-over-year scope 3 emissions data is primarily due to improved data availability and adjustments to methodology, as well as an increase in production volumes. We will continue to strive to improve our scope 3 estimates as global methodologies align and better data becomes available.

#### Overview of GHG scopes and emissions across the value chain



Adapted from the Greenhouse Gas Protocol

#### Total 2022 scope 3 GHG emissions estimated via different methods



1 Estimating petroleum industry value chain (scope 3) greenhouse gas emissions. "Overview of methodologies" published June 2016

# **VWATER** STEWARDSHIP

We responsibly manage the water we use for our operations so there is water available for other users in the watersheds, as well as our operations.

We're always looking for ways to be a good steward of this resource. Those efforts include using alternative water sources where possible and being more efficient with how we produce, source and discharge water. We also assess and act on water availability risk at the local level, with consideration of stakeholders, future demand, regulations and potential changes in climate.



# WATER STEWARDSHIP PROGRESS



1 Start year 2019 for water intensity.

2 Represents actions that Cenovus has taken or intends to take during the 12 months ending December 31, 2023.

# GOVERNANCE

In 2023 we plan to establish our Water Stewardship Standard and supporting procedures, providing further organizational clarity on water management roles and responsibilities.

- Environmental and water experts embedded in our corporate and operations teams work together to meet or exceed regulatory compliance in minimizing impacts to fresh water and the marine environment.
- Progress towards our water stewardship target is guided by the executive leadership team and overseen by the SSR Committee of the Board.
- We measure key water metrics and progress on developing water management plans, and present them in dashboards to support operational leadership's decision making.
- We continue to advance our commitment to water stewardship and tie performance to employee and executive compensation.
- We annually report on, and publicly disclose, our water use performance in our ESG report.

For a complete overview of our sustainability governance, refer to ESG Governance.

# **STRATEGY**

Cenovus uses water to create steam at our oil sands and thermal projects, recover light and heavy oil, refine and upgrade products at our downstream facilities, drill and complete wells, and build and maintain our sites. We track water metrics across our operations, and have procedures and programs in place to protect water sources.

The use of water sources alternative to fresh water is key to achieving our targets. Our oil sands operations at Foster Creek and Christina Lake recycle produced water – water brought to surface during the production of bitumen – and use primarily saline groundwater. Our Sunrise oil sands facility also recycles produced water in addition to using water from a neighbouring company's oil sands mining operations, including recycled tailings pond water and groundwater that has been in contact with bitumen.

Specific to our oil sands and thermal operations, we plan to leverage existing and new technologies to improve water processing and recycling efficiency. We continually refine our reservoir strategies to improve our SOR (the unit of steam required to produce a unit of oil) and have implemented advanced reservoir monitoring and modelling techniques to ensure the most efficient use of steam to maximize oil production. Water sourcing and efficiency considerations are integrated into our strategic plan and included as part of our annual capital allocation planning.

The primary lever to maintain a low fresh water intensity in oil sands is recycling more produced water as volumes increase. Secondary levers include implementing alternate cooling processes (where we now use fresh water) and expanding water treatment infrastructure to increase capacity for saline sources. On thermal fresh water intensity, we are leveraging our extensive experience with oil sands facilities to optimize water treatment and steam generation processes. We have also advanced more detailed reservoir monitoring to support future steaming strategies. Levers include the use of non-condensable gas in late reservoir life and evaluating the deployment of solvents. We continue to assess incorporating supplemental saline water sources and implementing new processes to achieve full or partial recycling at new or existing projects.

# **RISK MANAGEMENT**

Water-related risks and opportunities are formally identified, assessed and evaluated through asset and enterprise-level risk assessments, informed by our water management plans. Strategic risks associated with water stewardship are reviewed and evaluated for materiality on an annual basis. This review helps us establish and update priorities for focused action and mitigation.

We manage water availability risks in our oil sands region through extensive monitoring of our fresh water withdrawals. Our participation in the federal-provincial Oil Sands Monitoring Program enhances our understanding of cumulative effects to water from development. The potential availability constraints identified through this program inform our water source planning.

For a comprehensive overview of water-related risks, refer to the risk factors included in the "Risk Management and Risk Factors" section of our 2022 MD&A.

# **METRICS & TARGETS**

Our water stewardship targets are supported by the development of water management plans for all our operated assets by year-end 2025.

Oil sands and thermal operations represent approximately 94% of the fresh water used in Cenovus's upstream operations.

# **2022 PERFORMANCE**

## Alberta oil sands

Cenovus fresh water intensity has consistently outperformed the average of all Alberta in situ oil sands producers over the last several years.

Maintaining this fresh water intensity level requires a careful balance. Although oil production may be steady, the balance of water volumes and qualities associated with that production is constantly changing. The produced water at each oil sands facility changes in volume and quality over time as different areas of our reservoirs mature and new well pads are developed. Similarly, steam demands change over time. Each supplemental water source has operational or regulatory factors that limit how much we can turn the taps on and off as we adjust to produced water volume changes. Our facilities continually work to manage that balance while minimizing our use of fresh water.

Water volumes for oil sands operations at Christina Lake, Foster Creek, Sunrise and Tucker<sup>1</sup> are included in the Alberta Energy Regulator's (AER) Water Use Performance Report. Most of the water we use at these facilities (96% or 63 million cubic metres) is drawn from water sources the AER considers to be alternatives to high-quality fresh water. These include recycled

# OUR WATER STEWARDSHIP TARGETS<sup>2</sup>

Reduce fresh water intensity by 20% in oil sands by year-end 2030.

Reduce fresh water intensity by 20% in thermal operations by year-end 2030.

Cenovus divested the Tucker asset in the first quarter of 2022. Start year 2019 for water intensity.

Christina Lake oil sands asset. AB

produced water (85%), saline groundwater (9%), process affected water from a neighbouring company's tailings ponds (1%) and fresh water in contact with bitumen (1%). The remaining 4% of oil sands water use is sustainable withdrawal from high-quality fresh water sources.

# FRESH WATER INTENSITY

In 2022, our fresh water intensity in oil sands operations held steady at 0.12 bbls water/BOE, successfully maintaining our target level.

# Thermal projects in Saskatchewan

Fresh water intensity at our thermal operations increased to 4.00 bbls water/BOE in 2022, up from 3.71 the year before. Significant work remains to reach our target of 2.90 by year-end 2030. The increase in fresh water intensity in 2022 was not unexpected and resulted from a strategy to increase steam volumes injected, with fresh water intensity improving in coming years as SOR reduction strategies such as non-condensable gas co-injection are implemented.

Our Lloydminster thermal projects include 12 smaller facilities (most with nameplate production capacity of 10,000 bbls/d), which rely on an available supply of water from the North Saskatchewan River. Cenovus water licences for the Lloydminster thermal projects represent approximately 0.3% of the North Saskatchewan River's annual average flow. Water withdrawals were higher in 2022 at 23 million cubic metres due to the startup of the Spruce Lake North thermal project, and increased steam injection at all our thermal operations due to process improvements that increase the amount of steam we are able to generate with our boilers.

Reducing the fresh water intensity of Lloydminster thermal operations requires a different approach compared with our oil sands operations. Thermal plants are smaller and have shorter lifespans than an oil sands plant and are not well suited to water process retrofits. Many of our thermal plants are closer to the end of their life than the beginning, and usable saline water sources are not as readily available. In 2022, experts from across the business - including the development team, process engineering, water management, innovation, reservoir engineering, production engineering, site operations engineering and business opportunity development – continued to progress a framework for reaching our target for thermal operations. We are evaluating additional fresh water intensity reduction levers including a potential commercial-scale solvent project at a thermal asset and assessing supplemental saline sources and partial recycling options.

# Water management plans

To support our water intensity targets and water stewardship performance, we're developing water management plans for all operated assets by year-end 2025. Water management plans improve the way we source, transport, store, re-use and dispose of water. The plans, along with water expertise embedded throughout our business, identify and mitigate risks to fresh water quantity and quality in the planning, operating and late-life stages of our operations. The completion of water management plans is included in our 2023 corporate performance scorecard as part of our sustainability performance index. This is a first for Cenovus, with water stewardship now linked directly to employee and executive compensation. These plans include key minimum deliverables, including the water context which provides an overview of the watershed and how our operations source, transport, store/treat and dispose of water. Water context sets the stage for teams to identify risks and prioritize opportunities to mitigate those risks.

#### WATER MANAGEMENT PLANS

- In 2022 we completed two water management plans
- Edson conventional
- Lloydminster Upgrader and Ethanol Plant operations

Collaboration between subject matter experts and business units helped successfully identify opportunities to improve the way we manage water.

# Water stressed areas

Our fresh water withdrawals are assessed on the World Resources Institute Aqueduct Baseline Water Stress map, which measures the ratio of total water withdrawals against available renewable surface and groundwater supplies. In 2022, 2% (or about 0.57 million cubic metres) of Cenovus's fresh water withdrawals for industrial use occurred in areas of high baseline water stress. Eight per cent were from areas unrated for baseline water stress (where we are permitted to withdraw fresh water based on our demonstration of sustainability) and 90% occurred in areas with low to low medium baseline water stress, where water availability is good.





# 5 BIODIVERSITY

Our commitment to biodiversity means using less land when possible, and restoring areas affected by our operations when we're done.

Our operations span unique ecosystems. We plan ahead to develop comprehensive approaches to address ecological, wildlife and land use impacts specific to those ecosystems. We recognize that nature and climate concerns go hand in hand, and pose a risk to our business. By taking an integrated approach to sustainability and biodiversity, we help protect and restore the ecosystems where we operate.

> Reclaimed borrow pit near Christina Lake oil sands asset, AB

# **BIODIVERSITY PROGRESS**

2019-2022

66%

toward target

(1.992 reclamation

certificates)

# ranger Reclaim 3,000 decommissioned well sites by year-end 2025<sup>1</sup>.

# Restore more **habitat** than we use in the Cold Lake caribou range by year-end 2030<sup>2</sup>.

#### PROGRESS

TARGET

Project life to date 2016-2022 **232,869** total caribou habitat under restoration (acres) toward target

# 2022 KEY INITIATIVES

- Treated additional 180 km of linear features.
- Successfully trialed innovative linear restoration methods, including the Bracke mounder.
- Field work on GHG study in Foster Creek to better understand restoration programs in wetlands and how it relates to the **carbon sequestration cycle**.

# WHAT'S NEXT<sup>3</sup>

PROGRESS

2022

537

new

reclamation

certificates

received

Work with the Government of Alberta and other industry members on opportunities to improve site closure timelines. Execute a large area based closure (ABC) program of a former gas field in the Pelican/ Twin asset area near Wabasca in northern Alberta.

2022 KEY INITIATIVES

applications.

on two retail sites.

• Completed 791 initial reclamations.

• Planted more than **570,000** trees

• Submitted **574** reclamation certificate

• Received provincial regulatory closure

within our forested reclamation areas.

# WHAT'S NEXT<sup>3</sup>

Continuing to innovate in our caribou restoration program, including the potential development of "Bracke 2.0", where we will trial a customized amphibious carrier that puts less pressure on the ground to maximize the efficiencies of restoration in lowland environments.

# Continuing research on GHG study in Foster Creek to better understand restoration programs in wetlands and how they relate to the carbon sequestration cycle.

Tree planting at our Canoe Lake restoration program area at Foster Creek.

1 Start year 2019 for well reclamation.

2 Start year 2016 for caribou habitat restoration.

3 Represents actions that Cenovus has taken or intends to take during the 12 months ending December 31, 2023.

# **GOVERNANCE**

In 2023, we plan to establish our Land and Biodiversity Standard, providing further clarity on our approach to mitigate impacts and manage for the desired biodiversity outcomes.

- Progress toward our biodiversity targets is guided by the executive leadership team and overseen by the SSR Committee. We manage land use by avoiding disturbance where possible, and through mitigation and restoration of land used for operations.
- As each asset's land area is unique, we complete significant planning and analysis to determine the most comprehensive approach to managing an asset's lifecycle. In addition, each program's progress is tracked against key performance metrics which are presented in dashboards to support operational leadership's decision making.
- We fund and/or participate in regional initiatives and industry committees contributing directly or indirectly to species and habitat research, monitoring and mitigation.
  Furthermore, we implement and share innovative programs and practices through industry partnerships and conferences.

For a complete overview of our sustainability governance, refer to ESG Governance.

# **STRATEGY**

From project planning through to an asset's retirement, we take biodiversity considerations into account and identify potential environmental impacts so they can be avoided, minimized or mitigated to more quickly restore healthy, functioning ecosystems and achieve regulatory site closures. Pre-disturbance planning includes:

- Using reservoir knowledge, field assessments and advanced Geographic Information System tools to plan oil sands well pads and access corridors, minimize habitat impact, manage vegetation and maintain soil quality.
- Incorporating soils, vegetation, habitat assessment and mitigation, and regeneration planning into our project development plans.
- Optimizing clearing and revegetation in consideration of site conditions to avoid wildlife impacts and speed up recovery of stratigraphic wells and seismic lines.

While operations are underway, we take actions that support productive land use and minimize impact to biodiversity, including:

- Managing vegetation to reduce invasive plants, promote desirable natural vegetation and stabilize soils.
- Preventing spills.
- Limiting traffic and reducing speed and noise to reduce wildlife disturbance and collisions.
- Ensuring soil salvage piles are identified and maintained so we have adequate materials for future reclamation.
- Conserving soil and woody debris so that sites can be reforested once operations are complete.

When we cease operations at a well or facility, we retire the asset in a responsible manner. Reasonable efforts are made to re-use, sell, transfer, salvage or recycle materials associated with our decommissioning activities. Cenovus uses the ABC program in our asset retirement activities. ABC involves ensuring all scopes of work, including well abandonment, pipeline abandonment, facility decommissioning, remediation and reclamation are planned and executed effectively, including addressing larger and neighbouring areas at the same time, to progress sites to closure in the most efficient manner.

# **RISK MANAGEMENT**

Biodiversity-related risks and opportunities are formally identified, assessed and evaluated through asset and enterprise-level risk assessments. Risks associated with biodiversity and land use are reviewed and assessed for materiality on an annual basis, which helps us establish and update priorities for focused action and mitigation. We actively prioritize our asset retirement portfolio to ensure we are managing safety, environmental risk and regulatory compliance.

Environmental risk is managed throughout the lifecycle of our wells, pipelines and facilities. Our asset retirement portfolio is actively managed to progress all sites to remediation and reclamation, as quickly as is feasible.

Work is prioritized to ensure we meet or exceed stringent regulatory requirements and we are committed to meeting the annual provincial liability reduction targets in British Columbia, Alberta and Saskatchewan. These programs seek to better manage the inactive well inventory and expedite reclamation closure efforts, which directly aligns with Cenovus's corporate strategy.

For a comprehensive overview of biodiversity-related risks, refer to the risk factors included in the "Risk Management and Risk Factors" section of our 2022 MD&A.

# **METRICS & TARGETS**

The 3,000 well sites represent approximately 60% of our existing reclamation inventory, which we are actively progressing to regulatory closure by year-end 2025.

# **2022 PERFORMANCE**

In 2022, we made significant progress towards our biodiversity targets, including having reclaimed a total of 537 decommissioned well sites, which puts us at 1,992 reclaimed well sites between 2019 and 2022, or 66% of our 3,000 goal. We also reached the halfway mark in restoring more habitat than we use in the Cold Lake caribou range. We hit these milestones while also focusing on reclaiming some of the more challenging sites in our portfolio.

# Reclamation

In 2022, we completed 791 initial reclamations, the first step toward fully restoring sites, which involves recontouring, soil replacement and re-establishing vegetation. We also received 537 reclamation certificates from provincial regulators in 2022 and obtained provincial regulatory closure on two retail sites, which is a significant achievement due to their complex nature.

Overall, we received more reclamation certificates in 2022 than the year before. The certified land base was 700 fewer acres when compared to 2021, as Cenovus has focused our reclamation efforts on our conventional heavy oil program over the last few years. These well sites and associated access road footprints are typically smaller as they are primarily situated on cultivated land.



Well site reclamation



received since 2019



Caribou habitat



#### Restoration

Habitat restoration, widely understood to be a cornerstone for caribou recovery, is an area where Cenovus has taken a leadership role within our industry. Our work on habitat restoration in northeast Alberta has been ongoing since 2008. In 2016, we voluntarily introduced a 10-year Caribou Habitat Restoration Project, through which we've already restored more than 1,200 kilometres of linear land disturbances, including 180 kilometres in 2022. A cross-functional Caribou Task Team meets regularly to ensure ongoing alignment.

Our target to restore more land than we disturb in the Cold Lake caribou range is measured through our restoration ratio<sup>1</sup>, which compares the restored area against total disturbed area. We are currently 50% towards our 2030 target, which means we have restored 232,869 acres within the 470,133 acres<sup>2</sup> of disturbed leased land in caribou habitat.

Our efforts to restore land along linear features like pipelines and seismic lines demonstrate our commitment to addressing ecological, wildlife and land use impacts. As we restore linear features, some of them extend beyond the caribou habitat boundary and, even though we restore them, we do not count them towards our target numbers.

In 2022, we successfully trialed innovative methods and equipment to continue to improve the ecosystem for caribou, including testing a new high tech device called the Bracke mounder. The mounder was particularly successful with respect to the speed and quality of the microsites it created. Microsites help seedlings grow by providing a variation in temperature, moisture and sunlight depending on planting location. The largest barrier to using the Bracke mounder was its inability to traverse through lowland environments due to the weight of the carrier. In 2023, we plan to trial the device on a new amphibious custom carrier with ultra-low ground pressure, which is intended to maximize the efficiency of our restoration program.

In 2022, we also acted on our commitment to reduce the standard size of observation well footprints, resulting in using 21 acres, down from 57 acres, on more than 30 observation wells at our Sunrise and Foster Creek assets, reducing our overall impact on the land.

#### **RECLAMATION SPEND**

In 2022, our reclamation teams spent \$23.5 million with Indigenous vendors, which also aligns with one of our Indigenous reconciliation targets of spending a minimum of \$1.2 billion with Indigenous businesses between 2019 and year-end 2025. It's another demonstration of how our sustainability efforts are embedded across the organization.





<sup>1</sup> Our target ties restoration area to the area of disturbance used for operations, referred to as a restoration ratio, which allows us to measure progress against our activities and ensure we restore more land than we use. We believe this ambitious goal is unique among resource industries and sets Cenovus apart.

<sup>2</sup> The total area of caribou habitat considered disturbed was reduced by 13,533 acres in 2022 due to an asset divestment.

#### RECLAIMED LAND

Reclaimed areas equivalent to 2,189 football fields in 2022.





Our habitat restoration efforts in forest corridors near our operations are helping at-risk caribou populations.

Read more about a new Cenovus Energy-led study.



# INDIGENOUS RECONCILIATION

Cenovus works closely with Indigenous communities near our operations to ensure they share in the benefits of resource development.

We believe advancing Indigenous reconciliation means taking meaningful action. For Cenovus, that includes consultation, building trust and enabling long-term economic and social value by supporting Indigenous businesses, helping ensure communities benefit from having us as a neighbour.

> Portage College students in the Construction and Trades Readiness Program through our Indigenous Housing Initiative.

# **INDIGENOUS RECONCILIATION PROGRESS**



1 Represents actions that Cenovus has taken or intends to take during the 12 months ending December 31, 2023.

# GOVERNANCE

- The Indigenous Inclusion Advisory Committee (IIAC) is chaired by our Chief Sustainability Officer and Executive Vice-President of Stakeholder Engagement and is comprised of Cenovus's senior leaders from upstream operations, downstream, human resources, supply chain management, treasury and other business support functions. The IIAC provides guidance on Indigenous inclusion initiatives across the business and has a mandate to build capacity related to economic inclusion and employment, and for Indigenous inclusion initiatives, such as Indigenous awareness training for staff.
- Progress towards our Indigenous reconciliation targets is guided by the executive leadership team and overseen by the SSR Committee.
- Our Indigenous Relations Policy, developed in 2021 and rolled out across the company, outlines our commitment to the inclusion of Indigenous peoples in our business, in line with our commitment to reconciliation. The policy supports awareness and understanding of Indigenous history and culture, and our alignment with the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).

For a complete overview of our sustainability governance, refer to ESG Governance.

# **STRATEGY**

Cenovus focuses on engagement practices that are based on community needs and expectations, and the scale of projects, driven by our years of working with Indigenous communities. The strategy focus areas are:

- Consultation
- Relationships
- Employment
- Investment
- Business
- Benefit agreements (oil sands)

These focus areas guide our approach to meeting Indigenous community needs and providing meaningful engagement and business opportunities. Read more.

We integrate Indigenous business considerations into our supply chain to ensure companies are included in the evaluation process. Furthermore, business units work closely with the company's community and Indigenous affairs experts to identify Indigenous businesses that could provide goods and services to Cenovus. As relevant opportunities arise, they are assessed for potential inclusion, with a priority placed on those closest to our operations. Indigenous businesses include a mix of community-owned businesses, community joint-venture partnerships and individual entrepreneurs.

# **RISK MANAGEMENT**

As many of our operations are located on or near Indigenous lands, our relationship with Indigenous communities is critical to our success. If we are unable to maintain a positive relationship with our neighbouring communities, it could adversely impact our ability to explore, develop and continue to operate. It could also potentially impact our reputation, relationship with governments, local communities and other Indigenous communities.

In building and maintaining positive and mutually beneficial relationships with local Indigenous communities we strive to mitigate our risks, seize opportunities to access local knowledge and talent, and collaborate to build shared success. Other ways we manage risks and create shared opportunity include:

- Formalizing our relationships through long-term community agreements.
- Making progress on our Indigenous reconciliation targets.
- Continuing to execute on our Indigenous Housing Initiative commitments.
- Working to build opportunities for Indigenous employment within our business.
- Further strengthening Indigenous communities near our operations through ongoing social investment partnerships, such as post-secondary scholarships and training.

For a comprehensive overview of Indigenous reconciliation-related risks, refer to the risk factors included in the "Risk Management and Risk Factors" section of our 2022 MD&A.

# **METRICS & TARGETS**

Indigenous engagement and supporting reconciliation are central to how we do business and are key drivers of our Indigenous reconciliation targets.

# **2022 PERFORMANCE**

#### Indigenous business spend

Since launching our target, Cenovus has integrated spending with local Indigenous businesses into our supply chain and across many of our Canadian assets. In 2022, we spent \$395 million, or on average more than \$1 million each day, with Indigenous businesses, a 79% increase over the year before. Our 2019 to 2022 spend was approximately \$1 billion, putting us at 88% of our minimum target. These results reflect our efforts to embed Indigenous business considerations into our business strategies and day-to-day supply chain processes.

In 2022, we implemented additional spending in conventional operations and in new areas including engineering and construction services, where materials such as valves, rig mats and commodity chemicals required in our operating facilities were provided by Indigenous businesses. Working with Indigenous businesses helps meet our labour and service needs, while generating revenue for their communities, which strengthens local economies and builds long-term relationships. We continue to focus on including more Indigenous businesses in our operations, allowing for predictable income for nearby communities.

# OUR INDIGENOUS RECONCILIATION TARGETS

Achieve a minimum of \$1.2 billion

of spending with Indigenous businesses between 2019 and year-end 2025.

Attain **BOLD** PAR certification from the CCAB by year-end 2025.



Portage College students in the Construction and Trades Readiness Program through our Indigenous Housing Initiative.

# INDIGENOUS BUSINESS SPEND

Since 2010, we've spent approximately \$3.8 billion on goods and services provided by Indigenous businesses.

Our spending target helped focus efforts within the organization, with staff engaged to find new ways to achieve it. We intend to build on our current momentum, harnessing the enthusiasm of staff and continuing to integrate Indigenous business considerations across our operations.

Indigenous business spend



# **PAR certification**

The CCAB PAR program is Canada's only certification focused on best practices in Indigenous relations, with gold level the highest standard that can be achieved. It's a three-phase process based on four pillars: leadership action, community relations, employment and business development.

"Cenovus's strong history of working with local Indigenous communities and efforts to meaningfully include them in their business closely parallels the Progressive Aboriginal Relations (PAR) certification's focus." - PAR phase one analysis

Our certification efforts took a notable step forward in 2022 as we received feedback on our phase one efforts, designed to identify shortcomings. Participation in the program involves having an independent third party examine Cenovus's Indigenous relations practices. This analysis of our phase one information noted we went above and beyond required commitments, stating: "Cenovus's strong history of working with local Indigenous communities and efforts to meaningfully include them in their business closely parallels the Progressive Aboriginal Relations (PAR) certification's focus." We completed phase two in December 2022, which included reviewing the phase one assessment and gap analysis and developing an action plan, such as an Indigenous awareness training refresh for all Canadian staff. We submitted the phase two work for certification in January 2023.

Our internal phase two gap analysis found we have made progress in all areas, particularly community relations and business development, but that there is still work needed to advance Indigenous employment efforts. Cenovus works to transition Indigenous trainees into full-time positions within the company, however we have not set targets for Indigenous employment or reported our number of Indigenous employees. We will also be assessing the aggregated results of a voluntary self-identification survey for Canadian and U.S. employees conducted in 2022 as we work to determine next steps.

# **TIPI RAISING**

In August 2022, Indigenous-owned contractor Thomas Kanata raised a tipi at Christina Lake, with a smudging ceremony for all who attended.

# Read more about Indigenous engagement efforts at site.

According to the gap assessment, Cenovus's strategies and efforts that align with PAR, as well as recognized best practices in Indigenous engagement, include:

- Having an Indigenous engagement policy in place which outlines expectations and commitments and provides expectations for contractors and employees engaging with Indigenous communities.
- Our efforts to integrate Indigenous considerations into our business and strategy.
- The IIAC, which is comprised of senior leaders who help ensure Indigenous considerations are integrated into the company's employment and procurement processes.

• Our Indigenous Housing Initiative, launched after Indigenous communities told us about their urgent need for homes, which has been prioritized by Cenovus leadership.

Our work toward PAR gold certification is intended to help shape how we engage with Indigenous communities in the future. Our goal for the program is to leverage third-party insight to identify our strengths in how we engage with Indigenous people, as well as identify opportunities where we can be even better, all with the overarching goal of strengthening these relationships. We intend to apply for certification in 2025, at which time the PAR jury will confirm the verifier's findings and assign a certification level. Following the initial certification application, applicants must wait three years to reapply. While achieving gold is not a certainty, we have purposefully taken the approach to steward toward the best practices possible.

# UNDRIP

# UNITED NATIONS DECLARATION ON THE RIGHTS OF INDIGENOUS PEOPLES

Cenovus acknowledges UNDRIP as an important set of international standards that recognizes the human rights of Indigenous people and helps guide reconciliation. While UNDRIP has many provisions, we understand that free, prior and informed consent is an important aspect of respecting Indigenous rights through meaningful consultation and inclusion.

# Indigenous internship field program

Through our internship field program, we partner with Indigenous communities near our operations to source and hire local talent. This program offers trades experience and includes mentorship, dedicated training and development, networking opportunities and special events. It also includes an assigned technical coach and support network for apprenticeship coursework. We relaunched this program in 2021 with interns working at our Christina Lake and Foster Creek locations and have since expanded to include conventional operations. We intend to continue developing the program in 2023, including partnerships with key Indigenous service providers and expanding across additional operations. This will further deepen ties with local Indigenous communities and provide opportunities for youth to build skills, experience and relationships as they develop their careers.

#### **INSPIRING YOUTH**

Since 2018, as part of Indspire's Building Brighter Futures: Bursaries, Scholarships and Awards Program, we have awarded 210 Cenovus scholarships to Indigenous students. In the 2022-2023 application process, we increased the annual amount awarded to 50 scholarships worth \$5,000 each, from 40 scholarships worth \$3,500 each.

#### Indigenous Housing Initiative

Indigenous communities have told us a lack of housing is one of the most urgent issues they face. In 2020, we launched the Indigenous Housing Initiative to help address that challenge in the communities closest to our Christina Lake and Foster Creek oil sands operations in northern Alberta. The initiative, the largest community investment in Cenovus's history, committed \$50 million to build homes in Beaver Lake Cree Nation, Chard Métis, Chipewyan Prairie Dene First Nation, Cold Lake First Nations, Conklin Métis and Heart Lake First Nation, over five years. In 2023, we increased our funding by 20% due to increased construction material costs, to maintain our goal of building 200 homes. This additional funding also means our total investment in the program will be in excess of \$50 million. Between 2020 and 2022, we funded 81 homes across the six communities, and are planning to fund more than 40 new homes in 2023.

The program also includes a training component to help the communities develop internal expertise in home maintenance and construction. In fall 2022, graduation ceremonies were held in several Indigenous communities to celebrate students who completed the 24-week Construction and Trades Readiness Program. The program was developed with

In 2022, Cenovus was the first oil and gas company invited to join the First Nations Major Projects Coalition's Sustaining Partners program, where we can continue to advance meaningful economic reconciliation with Indigenous people by collaborating with like-minded organizations and Indigenous Nations focused on the same goal. Read more.



Portage College to provide opportunities for members of the six Indigenous communities that participate in the housing initiative, further fostering economic reconciliation.

See highlights from the Construction and Trades Readiness Program graduation and hear from some of the students.

#### INDIGENOUS HOUSING INITIATIVE

Cenovus's contributions to the Indigenous Housing Initiative were recognized with an award from Tribal Chiefs Employment and Training Services Association and IndigiConnect, during their 2022 Partner and Recognition Gala. The annual event honours partners working together to train and employ Indigenous people.

# 7 INCLUSION & DIVERSITY

Using our values to guide our approach, we're committed to building a diverse, equitable and inclusive workplace where people feel respected, valued and engaged.

We strive for a collaborative, physically and psychologically safe environment where staff can be themselves, feel a sense of belonging and thrive in their career. Creating this environment is a journey that requires us to continuously listen to our people and identify barriers and challenges, so we can work together to address and overcome them.





Represents actions that Cenovus has taken or intends to take during the 12 months ending December 31, 2023.

# GOVERNANCE

- Progress towards our I&D targets is guided by the executive leadership team and overseen at the HRC and Governance committees.
- Policies and standards outline our expectations of all staff, leaders and suppliers to create and maintain a safe, respectful and inclusive work environment.
- The executive leadership team holds leaders accountable for a positive work environment.
- Surveys and direct engagement gauge and help improve employee experience.
- In 2021, our Board revised its Board Diversity Policy, resulting in further alignment with the company's commitment to the principles of diversity.

For a complete overview of our sustainability governance, refer to ESG Governance.

# **STRATEGY**

Attracting and retaining a diverse workforce of smart, dedicated people while ensuring our culture supports a workplace that drives results is key to the success of our corporate strategy. We also recognize the oil and gas industry has specific challenges, for instance, there are fewer women as a percentage of the talent pool in the energy sector than almost any other major sector. Cenovus strives to foster a culture of inclusion that embraces equity and diversity of thought, experience and background, where people feel respected, valued and listened to. Investing in our people and our workplace culture while driving for continuous improvement is integral to managing potential risks to our workforce such as increased attrition in a competitive market or challenges in attracting qualified candidates.

Our I&D strategy has three focus areas:

**Leadership:** Advance commitment to I&D and enhance leader capability and accountability to progress our strategy.

**Talent management:** Engage, retain and advance diverse qualified talent.

**Talent acquisition:** Attract and hire diverse qualified talent and further position the company as an employer of choice.

# **RISK MANAGEMENT**

Inclusion and valuing the diversity of our staff play a critical role in strengthening our business performance and culture. Research indicates companies that have evolved strategies for inclusion and diversity benefit from broader perspectives which drive innovation, improve staff engagement, strengthen reputation, and increase talent acquisition and retention. To foster success and minimize potential workforce risks of being unable to attract or retain qualified employees with the professional and technical competencies to deliver on our strategy and business plan, we are committed to creating an environment that encourages development and training opportunities, promotes safety and wellbeing, and provides competitive compensation and flexible benefits plans.

Risk mitigations include:

- Creating a workplace that celebrates individual uniqueness, while fostering a culture of belonging to help Cenovus attract and retain top talent and drive long-term business value.
- Embracing diversity of thought, experience and background to help make better business decisions.
- Establishing guiding principles that apply across the business to guide decisions and behaviours for the greater good of Cenovus.

For a comprehensive overview of I&D-related risks, refer to the "Risk Management and Risk Factors" section of our 2022 MD&A.

# **METRICS & TARGETS**

We believe inclusion and diversity is good for employees and good for business. Our targets align with our core values.

# INCLUSION AND DIVERSITY NETWORKS

Our inclusion & diversity networks are voluntary, employee led and sponsored by an executive, with a focus on women, multiculturalism, Indigenous culture, LGBTQ2S+ pride and persons with disabilities. These networks increase awareness and influence practices and programs to enhance the experience of all staff.



# OUR INCLUSION & DIVERSITY TARGETS

Increase women in leadership roles<sup>1</sup> to

by year-end 2030.

Conduct a self-identification survey by year-end 2022; add a diversity target **beyond gender** in 2023.

# Aspire to have at least

representation on the Board from designated groups<sup>2</sup> among non-management directors, including at least 30% women, by year-end 2025.



 We define leadership roles to include Team Lead/Coordinator/Supervisor positions and above.
Designated groups are defined as women, Indigenous peoples, persons with disabilities and members of visible minorities.

Christina Lake oil sands asset, AB

# **2022 PERFORMANCE**

In 2022, we made progress on some of our inclusion and diversity efforts, including launching a voluntary self-identification survey for U.S. and Canadian employees and announcing the appointment of a new Board member. However, we also identified areas where we need to improve. Specifically, the number of women in leadership roles across the company held steady at about 25% from the year before, so we know more work is required to help meet our target to increase women in leadership roles to 30% by year-end 2030. While various factors, including natural attrition rates, acquisitions, divestitures and retirement can affect the overall number of leaders at Cenovus regardless of gender, the driving circumstance remains that our industry has more males than females in our active and potential workforce.



We are developing strategies to attract and retain female employees at all levels, including a specific focus on female leaders. Succession planning for critical roles helps build a sustainable organization that has the right capability and capacity to meet future demands. Although our succession planning process does not include a formal framework for the representation of designated groups, we are mindful of the importance and value of having a diverse representation of designated groups. We're also focused on the talent pipeline and building strong future female leaders by partnering with universities and colleges, and providing scholarships to a diverse group of students working towards education that can support the energy industry. We also offer targeted mentorship programs for our employees.

In the fourth quarter of 2022, we launched a selfidentification survey for Canadian and U.S. employees to complete on a confidential and voluntary basis, achieving our target. Participation numbers were around 52% in Canada and about 48% in the United States as of the second quarter of 2023, which exceeded our internal target of 30% for the first year. Employees can complete or update this information at any time, so we will continue to promote the survey and communicate how the information adds value to help increase participation.

Self-identification data is one of the tools that may help us better understand the makeup of our existing workforce. It is important that we identify opportunities to remove barriers to attracting, retaining and developing a diverse workforce, including those from under-represented groups, as we aspire to reflect the communities where we live and work. The data from the survey can help ensure we have the internal programs necessary to make Cenovus as inclusive and diverse a workplace as possible. We're assessing the results of the self-identification data along with Canadian census data and our organizational health survey results from late 2022 as we work to set an additional I&D target beyond gender in 2023.

In December 2022, we announced the appointment of a new director to our Board, effective January 1, 2023. Melanie Little's appointment increased midstream expertise on our Board while also meeting our commitment to have at least 30% women on the Board by the end of our 2023 annual general meeting of shareholders.

We continue to focus on psychological health, safety and belonging. Key initiatives, campaigns and events throughout the year help us maintain a respectful workplace where each of us feel safe to speak up, and where our thoughts and opinions are valued.

#### ATTRACTION AND RETENTION

Shared updated inclusion and diversity strategy with Board's HRC Committee, including plans to enhance attraction and retention of females by reviewing HR programs, assessing recruitment technologies, providing tools and training to leaders and exploring new partnerships with female-focused organizations to ensure we have an unbiased, equitable and progressive workplace.

#### Board gender diversity (non-management directors)



Board diversity (non-management directors)





Our unique partnership with Captivating International is helping lead to new skills, hope and opportunities for women in rural western China.

Read more about our partnership with Captivating International.

#### FLEXIBLE WORK AND LEAVES

We continue to provide a workplace flexibility program that gives eligible employees in most North American office locations the choice to work from home up to one day a week, subject to certain restrictions. Additionally, Cenovus provides several leave of absence options for employees who require time away from the workplace, including a short-term supportive leave option for non-union employees, which offers flexibility to respond to personal health issues and family emergencies.

#### CREATING AN INCLUSIVE SPACE

We have taken measures at various locations to provide inclusive amenities for staff. At our Calgary headquarters we have created floors that include family rooms (for nursing or pumping), a multifaith prayer room, an ablution station, a meditation room, all-gender washrooms, community sharing space for our network groups, flexible project spaces and a resource library. Our office in St. John's, Newfoundland and Labrador was designed with accessibility in mind, including various seating arrangements and heights in the kitchens and recessed sinks accessible to those using wheelchairs. The office space and the building it's housed in earned an Accessibility Certified Gold rating under the Rick Hansen Foundation Accessibility Certification program. We continue to assess all of our workplaces regularly to ensure they promote inclusiveness.



Since 2018, we've participated in the Canadian Mental Health Association's workplace mental health initiative, Not Myself Today, which helps transform mental health at work.

Read more about our mental health at work initiatives.



# 8 GOVERNANCE

We recognize the importance of robust governance for safe performance and reliable operations, as well as for driving long-term shareholder value.

Our governance structure includes Board and executive oversight, along with policies, standards, processes and procedures to guide the expected behaviours of our staff, how we run our facilities and how we manage risk.



# **ESG GOVERNANCE**

# **Board oversight**

By integrating ESG considerations into our business planning, our aim is to manage associated risks and seize opportunities over the short, medium and long term. ESG risks are considered within our Enterprise Risk Management (ERM) program, which helps us identify, assess and manage key risks to our business.

The Board of Directors approves our corporate strategic plan, which takes into account the opportunities and risks to our business, including those related to sustainability. In addition, the Board has oversight of our approach to sustainability and our processes and procedures to mitigate environmental impacts, address health and safety matters that may arise due to the company's activities, consider human capital management and operate in a manner consistent with good governance and recognized standards. Sustainability matters are reviewed at every regularly scheduled SSR Committee meeting and recommendations from management with respect to ESG matters, and processes and procedures to mitigate or address environmental impacts, are overseen by the Board. Discussions about important ESG topics, including climate change, are also incorporated into Board strategy sessions twice a year. To help keep Board members updated on important and evolving ESG topics, internal and external experts present to the Board during the year.

Our four Board committees act in an advisory capacity to the Board and oversee specific ESG risks relating to their respective mandates, which are addressed as required at every committee meeting and reported to the Board. The Board considers the skills, expertise, experience and independence of director nominees, and satisfies itself that as a whole the Board has the requisite skills and competencies to provide appropriate oversight of the company's risks and direction for its opportunities, including those relating to ESG matters, and to support the company's needs as its business and business environment evolve. The skills and experience matrix in our 2023 Management Information Circular discloses the level of experience or expertise of each of our directors in areas of importance to the company, including risk management, human capital management, government & stakeholder relations, corporate governance, safety, environment & health, cyber security, inclusion & diversity and climate & emissions.

# Safety, Sustainability and Reserves (SSR) Committee

The SSR Committee stewards the company's ESG commitments pursuant to our Sustainability Policy. The committee is specifically tasked with overseeing and monitoring the company's programs, policies and performance as they relate to sustainability, safety and the environment, and reviewing the company's disclosure relating to matters addressed in our Sustainability Policy, including ESG disclosure. The SSR Committee is also responsible for reviewing and reporting to the Board on the company's progress related to performance and achievement of our ESG targets. Updates on ESG target performance are presented on a quarterly basis.

## Director skills and experience

The data below depicts Cenovus directors' aggregated (as at April 26, 2023) level of self-assessed experience or expertise in the areas most connected to ESG. In 2022, our skills matrix was refreshed to include the categories climate & emissions and inclusion & diversity. For additional information, please see our 2023 Management Information Circular.



# **Audit Committee**

The Audit Committee oversees significant financial risks and areas of exposure. As part of this, it oversees the financial impacts from evolving ESG matters, including climate change, and impacts to Cenovus's access to capital and insurance coverage, and its credit ratings. Specific ESG-related oversight is addressed as necessary, including asset retirement obligation financial disclosure matters and those related to treasury, risk or insurance. As of April 26, 2023, the Audit Committee has oversight of risks related to cyber security as well.

#### Human Resources and Compensation (HRC) Committee

The HRC Committee oversees compensation and human resource matters, including Cenovus's organization and talent management strategies, people strategy and approach to culture, health and wellness, engagement, and inclusion and diversity. The committee is specifically tasked with overseeing progress related to performance and achievement of our inclusion and diversity targets. It is also responsible for making recommendations to the Board regarding ESG performance metrics in our short and long-term compensation plans. Inclusion and diversity is a standing agenda item at all regularly scheduled HRC Committee meetings. Compensation and/or pension governance is addressed at every regularly scheduled meeting of the committee, while updates on the corporate scorecard performance are presented on a quarterly basis.

#### **Governance Committee**

The Governance Committee has oversight of, and reports to the Board about, among other things, risk related to corporate governance including issues or principles related to risk governance, the effectiveness of management's strategic risk management programs and the proposal of directors for nomination. It is responsible for overseeing Cenovus's corporate governance generally, and our governance in relation to ESG matters in particular. Specifically, it is tasked with oversight of Board diversity and allocating oversight of emerging or developing issues related to ESG matters to the appropriate Board committee.

Additional governance controls exist at the management level, including committees, policies and compensation linked to ESG performance.

#### Management's role in ESG governance

The executive leadership team is accountable for executing the Board-approved corporate strategic plan, which takes into account the opportunities and risks to our business, including those related to climate and other sustainability matters. Each member of the executive leadership team has dedicated accountabilities that support our ESG targets and responsibility for the integration of sustainability across the business.

The Chief Sustainability Officer (CSO) reports directly to the Chief Executive Officer and is the primary link to the SSR Committee regarding ESG and sustainability matters. The CSO has primary accountability at the management level for ensuring ESG considerations are embedded in our strategy and business plans. In addition, the Chief Financial Officer provides reports to the Audit Committee and is accountable for addressing significant financial risks and areas of exposure, including those relating to climate change. The Senior Vice-President, People Services portfolio supports the HRC Committee in human capital management, including inclusion and diversity initiatives and progress. The Senior Vice-President, Legal, General Counsel & Corporate Secretary's portfolio supports the Governance Committee, including in the governance of ESG matters, and supports ensuring Cenovus's business and operations are legally compliant. There is diverse representation of teams across the company that monitor and provide guidance and recommendations to management pertaining to climate and other ESG-related issues.

## Sustainability Advisory Council

The Sustainability Advisory Council consists of senior, multidisciplinary experts from across the company who act as sustainability ambassadors and provide support in assessing and managing sustainability-related issues across the company. The council provides recommendations to relevant working groups and the executive leadership team to better inform ESG decisions and initiatives. In 2021, the council's membership and mandate were refreshed to reflect our combined business operations and updated ESG targets. The CSO & EVP, Stakeholder Engagement and the Director of Sustainability co-chair the council.

#### Incorporating ESG into our investment decisions

Cenovus takes a portfolio approach to making risk-based capital allocation decisions, guided by our capital allocation framework. The Investment Committee, chaired by the Chief Financial Officer and comprised of executive leadership team members, oversees the framework. The Investment Committee evaluates opportunities in a standardized way, using consistent evaluation methodologies and assumptions. This allows us to evaluate risks and tradeoffs, understand overarching impacts on our business and prioritize projects to determine which opportunities are best aligned with achieving our strategy.

In late 2021 and early 2022, we integrated our five ESG focus areas into our capital allocation framework. This ensures that continued progress towards achieving our targets is an important part of our business decision making, alongside other key investment criteria and priorities. It also provides an additional lens when evaluating and optimizing our portfolio, from asset development planning to decisions about project approvals, acquisitions and divestitures. Including ESG metrics in these decisions helps ensure we assess a full range of considerations to continue to create value and deliver on our commitments to shareholders. To further enhance this process, we developed an ESG manual to provide guidance on how a given business opportunity impacts the targets for each of our ESG focus areas.

# ESG link to compensation

Cenovus's compensation philosophy is to pay for performance and to align the interests of employees with the interests of our shareholders, while balancing objectives of market competitiveness and retention. The company's safety and sustainability performance is directly tied to discretionary employee and executive compensation, which includes individual and corporate performance components. With respect to individual performance, all employees, including the executive leadership team, have annual performance and development plans identifying their specific goals and objectives for the upcoming year. These align with our business plan and strategy and provide performance focus throughout the year. For members of our executive leadership team, they are also tied specifically to ESG factors and objectives. Achievement of these goals and objectives influences the individual performance component of discretionary compensation.

The corporate component of discretionary employee and executive compensation is assessed based on the annual corporate scorecard, which contains financial, operational and sustainability performance measures. These scorecard metrics have the greatest impact on executive and senior leadership compensation as a higher percentage of their discretionary compensation is tied to corporate performance compared to other employees. In 2022, the Board approved expanding the environmental metric used in the annual corporate performance scorecard. We now use a sustainability performance index that includes all of our ESG focus areas, rather than solely focusing on safety and reducing GHG emissions.

Our compensation balances financial, operational, sustainability and share price performance. Our Shareholder Advisory Vote on the Executive Compensation Policy provides shareholders with a formal opportunity to give their views on the disclosed objectives of the executive compensation program via a nonbinding advisory vote at the Annual Meeting of Shareholders.

## **Risk management**

In the pursuit of strategic objectives, Cenovus is exposed to risks, some of which impact the energy industry as a whole and others that are unique to our operations. Programs such as ERM and COIMS help ensure we are properly addressing risk in our business and embedding sustainability considerations in our strategy.

The ERM Policy outlines expectations for the program as well as the roles and responsibilities of all staff. Our ERM program drives the identification, measurement, prioritization and management of risk across the company, and is aligned with key attributes recommended by leading international risk management frameworks, including ISO 31000:2018 – Risk Management Guidelines and COSO Enterprise Risk Management – Integrating with Strategy and Performance. The results of our ERM program are presented to senior leaders and our Board through regular updates and semi annual risk reports, and reflected in our annual MD&A.

Building on the ERM Policy, we have an established risk management framework supported by several standards and tools, including the Cenovus risk matrix. Applying a single, standardized risk assessment tool enables us to identify, evaluate and communicate hazards and risks consistently across the organization, and supports effective risk-based decision making. Risk assessment considers, among other things, potential health and safety, environmental, regulatory, operational, financial and reputational impacts to our business, along with likelihood of occurrence, in the context of our risk tolerance.

# Our policy management and compliance approach

Our Board has oversight of compliance with Cenovus's corporate policies and standards stemming from our Code of Business Conduct & Ethics. Cenovus's Policy Management Standard supports this oversight by ensuring Cenovus's corporate policy documents are assigned ownership, are consistent in their format, are readily accessible, provide clarity for staff and are reviewed and/or updated annually.

# Code of Business Conduct & Ethics (Code)

Our Code reflects the company's commitment to conducting business safely, legally, ethically and sustainably, and references our values, policies, standards and guidelines. The Code is reviewed and recommended by the Business Conduct & Integrity Committee and the executive leadership team, and approved by the Board of Directors. Each year, all directors, officers and staff are asked to review the Code and confirm they understand their responsibilities and agree to the Code requirements. Suppliers and service providers should review the Code and are encouraged to participate on all levels with the principles and guidance it provides. Topics in the Code relate to our values and reputation, and inherently to the ESG factors indicated below, most of which have an associated policy document to govern expected behaviour. Policies and standards are a foundational component of Cenovus's compliance and ethics program. The program is continually assessed against internal and external risks. In early 2023, to more clearly articulate the governance and alignment of our lobbying and public advocacy activities with our corporate objectives, strategy, targets and ambition, our Board approved amendments to our Code and the mandate of the SSR Committee, and we enhanced information available on the company's website.

# Specific corporate policies

We are aware of our compliance obligations under applicable legal and regulatory frameworks in the jurisdictions in which we operate. Specific and important laws or topics addressed in the Code through applicable policies or standards include:

# Social

#### Human rights

We recognize the fundamental importance of human rights. To reinforce this, in 2021 we formalized our existing human rights commitments in a Human Rights Policy that reflects our values and behaviours and further supports the sustainable operation of our business in the jurisdictions and communities in which we operate.

We are guided by the UN Universal Declaration of Human Rights and are informed by other international standards, including the UN Guiding Principles on Business and Human Rights and the International Labor Organization's Declaration of Fundamental Principles and Rights at Work.

Cenovus respects an employee's right to freedom of association and to negotiate through relevant representative bodies, where applicable.

#### POLICY AND OUR COMMITMENT TO ESG

Cenovus's existing policy documents readily support our commitment to sustainability. As depicted below, the environmental factors noted are Cenovus's environmental targets, and the social and governance factors reflect common categories to which our social and governance policies are aligned.



Internal

incident risk

management

#### Indigenous relations

To further support our commitment to Indigenous reconciliation, an Indigenous Relations Policy was developed in 2021 and rolled out across the company. It confirms our responsibility and provides guidance on how to uphold the principles of Indigenous rights, consultation, economic opportunities and community prosperity. The policy supports awareness and understanding of Indigenous history and culture, and supports our alignment with UNDRIP. The policy outlines our commitment to the inclusion of Indigenous peoples in our business, in line with our commitment to reconciliation and the principles of UNDRIP. Our employees and contractors are expected to uphold the principles of the policy.



#### Governance

# Anti-bribery, anti-corruption & anti-money laundering, and trade compliance

We are committed to complying with anti-bribery, anti-corruption & anti-money laundering laws and regulations, including those issued by Canada, the United States and other nations as applicable. The Anti-Bribery, Anti-Corruption & Anti-Money Laundering Standard, Trade Laws & Acting with Integrity Policy and the Trade Compliance Standard describe the process requirements and responsibilities in place to meet our commitment to compliance and address risks associated with anti-bribery, anti-corruption, anti-money laundering, economic sanctions and embargoes, human rights and forced labour, and anti-boycott laws. A compliance program element called the Know your Client

### SUSTAINABILITY

Cenovus first implemented our Sustainability Policy in 2010 and it continues to evolve through our annual review process. In 2021, we completed a comprehensive update to reflect our new ESG focus areas and expanded business operations. Our Sustainability Policy, together with our Code, guides our actions and outlines our commitment to embedding environmental, economic and social considerations in our business decisions. This commitment requires addressing our GHG emissions, innovating to minimize our impact on wildlife, water and the environment, providing a safe and inclusive workplace, and consulting and collaborating with local and Indigenous communities. or Know your Counterparty process involves vetting customers and suppliers through a comprehensive third-party review, which includes using a global trade management and compliance database. We provide appropriate staff with regular training on both standards.

# **Payment transparency**

Reporting payments to governments is an important way to increase transparency and trust with our stakeholders. Disclosure is made through the annual Extractive Sector Transparency Measures Act (ESTMA) report, available on our website. The report provides an overview of the payments made to all municipal, provincial, state, federal and Indigenous governments by Cenovus and our subsidiaries, and partnerships involved in the commercial development of crude oil and natural gas.


#### Integrity Helpline and investigations

We have several mechanisms in place to report business or workplace concerns, including through the Integrity Helpline. Stakeholders, including local community residents and other members of the public, as well as our employees, contractors and suppliers, are encouraged to report business or workplace conduct concerns. The Integrity Helpline is independently operated by a third-party service provider and allows concerns to be reported confidentially and anonymously. Contact information for the Integrity Helpline is available on cenovus.com and our intranet.

The Cenovus Investigations Committee, comprised of a broad group of senior leaders, oversees investigations of alleged violations of Cenovus's policies, standards, processes and procedures in accordance with Cenovus's Investigations Standard and Investigations Process.

Retaliation against individuals who report concerns or participate in investigations relating to alleged violations is a violation of the Code and reported allegations will be investigated in accordance with our Investigations Standard.

The Investigations Committee prepares and provides reports on investigations to the company's Business Conduct & Integrity Management Committee, the executive leadership team and committees of the Board. The committees report any significant or material investigations to our Board. Where identified, broader issues and trends may be addressed through additional training programs, increased awareness and/or new policies or standards.

Cenovus launched the Expect Respect program in late 2021 to increase awareness regarding Cenovus's expectations of a respectful workplace for all workers performing work at a Cenovus site or office. The awareness sessions have been presented to more than 3,000 staff at all North American Cenovus sites, supported by a poster campaign and information on the intranet and we saw a direct increase of reporting to the Integrity Helpline following the launch of the campaign.

#### Training and compliance

Quarterly ethics and compliance training is provided to all staff. In 2022, mandatory training was provided on the following topics, largely related to social factors:

- Information security
- Expect Respect
- Inclusion & diversity
- Code of Business Conduct & Ethics

Additional training is provided to specific areas of the business based on risk and role requirements.

#### Cyber security

We have established enhanced cyber security measures, and continue to evolve our cyber security measures in response to an evolving threat landscape, recognizing that data must be protected. From email phishing schemes to attempts at malware attacks, cyber defence is critical to safe operations, protecting the availability, integrity, security and safety of critical infrastructure.

#### Advocacy and memberships

We comply with the applicable lobbying and election laws and reporting requirements in the jurisdictions where we operate. We have rigorous internal policies and procedures for lobbying and comply with all laws requiring companies to record their lobbying activities with applicable government registries.





All Cenovus lobbying is conducted in alignment with our Code of Business Conduct & Ethics and Cenovus seeks public policy solutions that preserve shareholder value and align with our corporate objectives, strategy, targets and ambition.

We regularly participate in policy discussions as part of our membership with business associations and groups, providing guidance to encourage alignment of these groups' ESG stances with that of Cenovus. We urge the third-party groups we support to be fact-driven in their public positioning and solutions-oriented. Cenovus supports groups that are generally aligned with its corporate objectives, strategy, targets and ambition, recognizing that industry groups must balance the diverse views of their members and perfect alignment with Cenovus's priorities is not always possible. Where misalignment is encountered, Cenovus works to persuade our peers of the merits of our position as we strive to be a constructive voice in the public policy space. While we might not always be successful in persuading others of our view, we firmly believe that in almost all cases it is better to be present and represent a constructive, diverse view than to be absent from the dialogue.

For additional information, please see our website.

#### Supply chain management

Cenovus strives to work with suppliers who operate legally, ethically and responsibly, using risk-based prequalification criteria to verify they are aligned with our safety and operational integrity requirements, and to protect the company from potential legal and reputational risks. Our prequalification assessment includes health, safety, environmental and technical compliance, and financial considerations, among other supply chain management metrics. We have expanded prequalification to include additional sustainability requirements, which are applied based on company size and global presence. Prior to commencing work, we require all suppliers and their personnel working at a Cenovus location to complete our life saving rules awareness training, corporate safety orientation and any site-specific orientation. These orientations, periodic audits of supplier health and safety programs, and spot validation checks of required certifications help ensure basic safety knowledge. In addition, over the life of the contractual relationship, where applicable, we conduct ongoing monitoring and assessment of contractor performance against previously agreed on key performance indicators, including safety, environmental, health, quality, cost, schedule and technical considerations.

Systems are also in place to ensure suppliers have adequate insurance based on the risk exposure level determined by Cenovus.

#### Supplier Code of Business Conduct

Cenovus's Supplier Code of Business Conduct ensures our suppliers know and understand Cenovus values, and our efforts to encourage suppliers align to our commitment to ethical operations, human rights and sustainability considerations, among others.

#### Local suppliers

Whenever possible, we hire locally and actively engage businesses from the areas around our operations. As part of our supply chain management process, we evaluate potential suppliers for safety standards and Indigenous inclusion to ensure strategic businesses are prioritized, when it is feasible to do so. To further support the use of Indigenous businesses, our request for proposal process, sourcing templates and other procedures have been adjusted to include Cenovus's focus on Indigenous economic reconciliation and to capture any potential Indigenous inclusion opportunities across our operating areas.

# **Second Second S**

# A detailed summary of the reporting boundaries can be found in the Reporting approach section of this report.

We have included pro forma data for certain safety metrics, and metrics that support our ESG targets. We include 2019 pro forma data to reflect the starting year for many of our ESG targets, and 2020 pro forma data to provide a comparable year-over-year analysis of our performance. Historical five-year data are otherwise legacy Cenovus performance only.



				PRO FORMA		LEGACY CENOVUS			GLOBAL FRAMEWORK INDICATORS		
KEY PERFORMANCE INDICATOR	UNIT OF MEASURE	2022	2021	2020	2019	2020	2019	2018	SASB	IPIECA	LEVEL OF ASSURANCE
	SAFETY 8		GRITY								
Total recordable incident rate (TRIR) <sup>(SA-1) (SA-2)</sup>	Rate	0.28	0.29 <sup>(SA-3)</sup>	0.32	0.42	0.25	0.30	0.25	EM-EP-320a.1; EM-RM-320a.1; RT-CH-320.a.1		Limited
Employees	Rate	0.14	0.17 <sup>(SA-3)</sup>	0.35	0.23	0.33	0.15	0.18	EM-EP-320a.1; EM-RM-320a.1; RT-CH-320.a.1		
Contractors	Rate	0.32	0.33	0.30	0.49	0.22	0.35	0.26	EM-EP-320a.1; EM-RM-320a.1; RT-CH-320.a.1		
Lost time incident (LTI) frequency (SA-2)	Rate	0.05	0.03	0.05	0.05	0.02	NPR	NPR		SHS-3	Limited
Employees	Rate	0.01	0.01	0.07	0.08	0	NPR	NPR		SHS-3	
Contractors	Rate	0.06	0.03	0.05	0.05	0.03	NPR	NPR		SHS-3	
Near miss frequency rate (NMFR) <sup>(SA-2)</sup>	Rate	3.50	5.86	-	-	NPR	NPR	NPR	EM-RM-320a.1		
Employees	Rate	8.88	14.16	-	-	NPR	NPR	NPR	EM-RM-320a.1		
Contractors	Rate	1.94	2.63	-	-	NPR	NPR	NPR	EM-RM-320a.1		
Fatalities <sup>(SA-4)</sup>	Number	0	0	0	0	0	0	1	EM-EP-320a.1; EM-RM-320a.1; RT-CH-320.a.1		Limited
Employees	Number	0	0	0	0	0	0	0	EM-EP-320a.1; EM-RM-320a.1; RT-CH-320.a.1		
Contractors	Number	0	0	0	0	0	0	1	EM-EP-320a.1; EM-RM-320a.1; RT-CH-320.a.1		
Process safety events (PSE) (SA-4)	Number	21	20	21	33	2	8	16			
Tier 1	Number	9	9	8	6	1	1	6	EM-EP-540a.1; EM-RM-540a.1; RT-CH-540a.1		Limited
Tier 2 <sup>(SA-5)</sup>	Number	12	11	13	27	1	7	10	EM-RM-540a.1		Limited
Average hours of health, safety and emergency response training <sup>(SA-6)</sup>	Hours	8.16	8.09	-	-	NPR	11.63	NPR	EM-EP-320a.1; RT-CH-320.a.1		
Employees <sup>(SA-7)</sup>	Hours	8.11	8.29	-	-	NPR	12.50	NPR	EM-EP-320a.1; RT-CH-320.a.1		
Contractors	Hours	8.36	7.30	-	-	NPR	8.30	NPR	EM-EP-320a.1; RT-CH-320.a.1		

				PRO FORMA		LEGACY CENOVUS			GLOBAL FRAMEWORK INDICATORS		
KEY PERFORMANCE INDICATOR	UNIT OF MEASURE	2022	2021	2020	2019	2020	2019	2018	SASB	IPIECA	LEVEL OF ASSURANCE
FINAN				IAL INDICA	TORS						
Gross sales <sup>(FI-1)</sup>	\$ millions	71,765	48,811	-	-	13,914	21,715	21,403 <sup>(FI-2)</sup>			
Cash flow from operating activities	\$ millions	11,403	5,919	-	-	273	3,285	2,154 <sup>(FI-2)</sup>			
Annual capital investments	\$ millions	3,708 <sup>(FI-3)</sup>	2,563 <sup>(FI-3)</sup>	-	-	841 <sup>(FI-3)</sup>	1,176	1,363			
Amount invested in renewable energy (FI-4)	\$ millions	5	5	-	-	-	NPR	NPR	EM-EP-420a.3		
Revenue generated by renewable energy sales (FI-5)	\$ millions	930	625	-	-	-	NPR	NPR	EM-EP-420a.3		
Current income tax expense (recovery)	\$ millions	1,639	276	-	-	-13	17	-126			
Royalties	\$ millions	4,868	2,454	-	-	371	1,173	548 <sup>(FI-2)</sup>			
Proved reserves (before royalties)	MMBOE	6,082	6,077	-	-	5,030	5,103	5,167			
Proved and probable reserves (before royalties)	ммвое	8,869	8,278	-	-	6,686	6,871	6,988			
AC					CS						
Upstream production (AM-1)	BOE/d	722,632	764,639	723,002	725,134	467,738	447,830	470,383	EM-EP-000.A		Limited
Oil (AM-2)	bbls/d	622,805	635,798	587,548	570,832	389,499	360,194	369,497	EM-EP-000.A		
Oil sands	bbls/d	485,034	489,622	445,417	428,667	NPR	NPR	NPR			
Thermal oil	bbls/d	99,899	97,594	82,765	82,071	NA	NA	NA			
Natural gas <sup>(AM-3)</sup>	MMscf/d	597	772	811	889	468	490	566	EM-EP-000.A		
Electricity (AM-4)	MWh/d	61	241	403	548	403	548	NPR			
Downstream throughput (AM-1)	BOE/d	249,876	236,391	229,678	233,482	NA	NA	NA	EM-RM-000.A		Limited
Refining operating capacity (AM-5)	Million barrels per calendar day	0.29	0.29	-	-	NA	NA	NA	EM-RM-000.B		
Chemical production	BOE/d	2,778	2,360	2,616	2,937	NA	NA	NA	RT-CH-000.A		Limited
Ethanol (AM-6)	M³/d	778	661	-	-	NA	NA	NA	RT-CH-000.A		

				PRO F	ORMA	LEC	GACY CENO	vus	GLOBAL FRAMEWORK INDICATORS			
KEY PERFORMANCE INDICATOR	UNIT OF MEASURE	2022	2021	2020	2019	2020	2019	2018	SASB	IPIECA	LEVEL OF ASSURANCE	
	CLIM	ATE & GHG	emissions (	Gross opera	ated unless n	oted otherv	vise)					
Scope 1 GHG emissions (GHG-1)	MMt CO <sub>2</sub> e	16.3	17.6	17.5	18.1	8.7	8.6	8.6			Reasonable	
Exploration & production	MMt CO <sub>2</sub> e	14.0	15.1	15.0	15.7	8.7	8.6	8.6	EM-EP-110a.1			
Midstream (GHG-8)	MMt CO <sub>2</sub> e	0.0	0.0	0.0	0.0	NA	NA	NA	EM-MD-110a.1			
Refining & marketing	MMt CO <sub>2</sub> e	2.2	2.3	2.4	2.3	NA	NA	NA	EM-RM-110a.1			
Chemicals	MMt CO <sub>2</sub> e	0.1	0.1	0.1	0.1	NA	NA	NA	RT-CH-110a.1			
Scope 1 GHG emissions by source	MMt CO,e											
Combustion	MMt CO <sub>2</sub> e	14.6	15.1	-	-	8.0	7.6	7.6	EM-EP-110a.2			
Flared hydrocarbons	MMt CO <sub>2</sub> e	0.4	0.5	-	-	0.1	0.1	0.1	EM-EP-110a.2			
Process emissions	MMt CO <sub>2</sub> e	0.0	0.3	-	-	0.0	0.0	0.0	EM-EP-110a.2			
Vented emissions	MMt CO <sub>2</sub> e	1.2	1.5	-	-	0.4	0.2	0.3	EM-EP-110a.2			
Fugitive emissions	MMt CO <sub>2</sub> e	0.1	0.3	-	-	0.2	0.6	0.6	EM-EP-110a.2			
Scope 1 GHG emissions intensity (GHG-2)	t CO <sub>2</sub> e/MBOE	45.8	47.9 <sup>(GHG-4)</sup>	49.8	51.3	50.8	52.4	49.9		CCE-4	Limited	
Exploration & production (GHG-2)	t CO,e/MBOE	53.1	54.2	56.6	59.0	50.8	52.4	49.9		CCE-4		
Midstream <sup>(GHG-3)</sup> (GHG-8)	t CO,e/MBOE	NA	NA	NA	NA	NA	NA	NA		CCE-4		
Refining & marketing <sup>(GHG-2)</sup>	t CO,e/MBOE	24.0	27.1	28.2	27.3	NA	NA	NA		CCE-4		
Chemicals (GHG-2)	t CO,e/MBOE	108.3	110.3 <sup>(GHG-4)</sup>	50.0	47.8	NA	NA	NA		CCE-4		
Scope 2 GHG emissions	MMt CO <sub>2</sub> e	1.8	1.8	1.9	2.1	0.2	0.2	0.4		CCE-4	Reasonable	
Exploration & production <sup>(GHG-9)</sup>	MMt CO <sub>2</sub> e	0.9	0.9	0.9	1.0	0.2	0.2	0.4		CCE-4		
Midstream (GHG-8)	MMt CO <sub>2</sub> e	0.1	0.0	0.0	0.1	NA	NA	NA		CCE-4		
Refining & marketing <sup>(GHG-5)</sup>	MMt CO <sub>2</sub> e	0.9	0.9	1.0	0.9	NA	NA	NA		CCE-4		
Chemicals (GHG-5)	MMt CO <sub>2</sub> e	0.1	0.1	0.1	0.1	NA	NA	NA		CCE-4		
Scope 2 GHG emissions intensity (GHG-2)	t CO <sub>2</sub> e/MBOE	5.2	5.0	5.5	6.0	0.9	1.5	2.2		CCE-4	Limited	
Exploration & production (GHG-2)	t CO <sub>2</sub> e/MBOE	3.4	3.2	4.0	3.6	0.9	1.5	2.2		CCE-4		
Midstream <sup>(GHG-3)</sup> (GHG-8)	t CO <sub>2</sub> e/MBOE	NA	NA	NA	NA	NA	NA	NA		CCE-4		
Refining & marketing <sup>(GHG-2)</sup>	t CO <sub>2</sub> e/MBOE	9.8	9.9	11.5	11.0	NA	NA	NA		CCE-4		
Chemicals (GHG-2)	t CO <sub>2</sub> e/MBOE	51.1	55.2	60.9	64.3	NA	NA	NA		CCE-4		

				PRO FORMA		LEGACY CENOVUS		vus	GLOBAL FRAMEWORK INDICATORS		
KEY PERFORMANCE INDICATOR	UNIT OF MEASURE	2022	2021	2020	2019	2020	2019	2018	SASB	IPIECA	LEVEL OF ASSURANCE
Scope 1 & 2 GHG emissions	MMt CO <sub>2</sub> e	18.2	19.4	19.4	20.2	8.9	8.8	8.9		CCE-4	
Exploration & production <sup>(GHG-9)</sup>	MMt CO <sub>2</sub> e	14.9	16.0	15.8	16.7	8.9	8.8	8.9		CCE-4	
Midstream <sup>(GHG-8)</sup>	MMt CO <sub>2</sub> e	0.1	0.0	0	0.1	NA	NA	NA		CCE-4	
Refining & marketing <sup>(GHG-5)</sup>	MMt CO <sub>2</sub> e	3.1	3.2	3.3	3.3	NA	NA	NA		CCE-4	
Chemicals (GHG-5)	MMt CO <sub>2</sub> e	0.2	0.1	0.2	0.2	NA	NA	NA		CCE-4	
Scope 1 & 2 GHG emissions intensity (GHG-2)	t CO <sub>2</sub> e/MBOE	51.0	52.9 (GHG-4)	55.3	57.3	51.7	53.8	52.1		CCE-4	
Exploration & production (GHG-2)	t CO,e/MBOE	56.5	57.4	59.9	62.9	NA	NA	NA		CCE-4	
Midstream <sup>(GHG-3)</sup> (GHG-8)	t CO,e/MBOE	NA	NA	NA	NA	NA	NA	NA		CCE-4	
Refining & marketing (GHG-2)	t CO,e/MBOE	33.8	37.0	39.7	38.2	NA	NA	NA		CCE-4	
Chemicals <sup>(GHG-2)</sup>	t CO,e/MBOE	159.4	165.4 <sup>(GHG-4)</sup>	111.0	112.1	NA	NA	NA		CCE-4	
Scope 1 & 2 GHG emissions (GHG-6) (GHG-10) (Net equity)	MMt CO,e	22.1	23.1	23.2	24.8	NPR	NPR	NPR		CCE-4	
Scope 3 GHG emissions (Net equity)	MMt CO,e									CCE-4	
Purchased goods and services	MMt CO,e	9.8	7.4	7.2	4.8	NPR	NPR	NPR		CCE-4	
Capital goods <sup>(SC-1)</sup>	MMt CO,e	0.1	0.1	0	0	NPR	NPR	NPR		CCE-4	
Fuel and energy-related activities (not included in scope 1 or 2)	MMt CO,e	3.5	3.4	2.9	2.9	NPR	NPR	NPR		CCE-4	
Upstream transportation and distribution	MMt CO,e	2.1	2.1	2	1.9	NPR	NPR	NPR		CCE-4	
Waste generated in operations <sup>(SC-2)</sup>	MMt CO,e	NA	NA	NA	NA	NPR	NPR	NPR		CCE-4	
Business travel <sup>(SC-3)</sup>	MMt CO,e	0.0	0.0	0.0	0.0	NPR	NPR	NPR		CCE-4	
Employee commuting <sup>(SC-3)</sup>	MMt CO,e	0.0	0.0	0.0	0.0	NPR	NPR	NPR		CCE-4	
Upstream leased assets <sup>(SC-2)</sup>	MMt CO,e	NA	NA	NA	NA	NPR	NPR	NPR		CCE-4	
Downstream transportation and distribution	MMt CO,e	0.5	0.5	0.5	0.5	NPR	NPR	NPR		CCE-4	
Processing of sold products (SC-10)	MMt CO,e	9.8	8.5	8.6	6.9	NPR	NPR	NPR		CCE-4	
Use of sold products - upstream production	MMt CO,e	117.8	118.2	112.9	111.9	NPR	NPR	NPR		CCE-4	
Use of sold products - refinery throughput (SC-4) (SC-10)	MMt CO,e	87.9	72.4	67.6	74.8	NPR	NPR	NPR		CCE-4	
Use of sold products - retail sales	MMt CO,e	2.9	5.2	5	5.3	NPR	NPR	NPR		CCE-4	
End of life treatment of sold products (SC-2)	MMt CO,e	NA	NA	NA	NA	NPR	NPR	NPR		CCE-4	
Downstream leased assets <sup>(SC-5)</sup>	MMt CO,e	NA	NA	NA	NA	NPR	NPR	NPR		CCE-4	
Franchises <sup>(SC-3)</sup>	MMt CO <sub>2</sub> e	0.0	0.0	0.0	0.0	NPR	NPR	NPR		CCE-4	

				PRO FORMA		LEGACY CENOVUS			GLOBAL FRAMEWORK INDICATORS		
KEY PERFORMANCE INDICATOR	UNIT OF MEASURE	2022	2021	2020	2019	2020	2019	2018	SASB	IPIECA	LEVEL OF ASSURANCE
Investments <sup>(SC-6)</sup> (SC-10) (SC-11)	MMt CO <sub>2</sub> e	0.0	0.0	0.0	0.0	NPR	NPR	NPR		CCE-4	
Total using upstream production category 11.1 <sup>(SC-7)</sup> (SC-10)	MMt CO <sub>2</sub> e	143.7	143.9	137.6	133.4	NPR	NPR	NPR		CCE-4	
Total using refinery throughput category 11.2 <sup>(SC-8)</sup> (SC-10)	MMt CO <sub>2</sub> e	113.8	98	92.3	96.2	NPR	NPR	NPR		CCE-4	
Total using retail sales category 11.3 <sup>(SC-9) (SC-10)</sup>	MMt CO <sub>2</sub> e	28.8	30.8	29.7	26.8	NA	NA	NA		CCE-4	
Methane emissions	MMt CO <sub>2</sub> e	1.1	1.6	2.1	2.6	0.6	0.8	0.9		CCE-5	
Exploration & production	MMt CO <sub>2</sub> e	1.0	1.5	2.0	2.5	0.6	0.8	0.9		CCE-5	
Midstream <sup>(GHG-8)</sup>	MMt CO <sub>2</sub> e	0.0	0.0	0.0	0.0	-	-	-		CCE-5	
Refining & marketing	MMt CO <sub>2</sub> e	0.1	0.1	0.1	0.1	-	-	-		CCE-5	
Chemicals	MMt CO <sub>2</sub> e	0.0	0.0	0.0	0.0	-	-	-		CCE-5	
Scope 1 emissions from methane	Percentage	6.7	9.0	-	-	7.0	9.8	10.7			
Exploration & production	Percentage	7.4	10.1	-	-	7.0	9.8	10.7	EM-EP-110a.1		
Midstream <sup>(GHG-8)</sup>	Percentage	0.7	0.3	-	-	-	-	-	EM-MD-110a.1		
Refining & marketing	Percentage	2.7	2.2	-	-	-	-	-			
Chemicals	Percentage	0.1	0.1	-	-	-	-	-			
Emissions covered under emissions limiting regulation	Percentage	94	93	-	-	100	84	82			
Exploration & production (GHG-7)	Percentage	100	100	-	-	100	84	82	EM-EP-110a.1		
Midstream <sup>(GHG-8)</sup>	Percentage	100	100	-	-	-	-	-	EM-MD-110a.1		
Refining & marketing	Percentage	55	51	-	-	-	-	-	EM-RM-110a.1		
Chemicals	Percentage	100	100	-	-	-	-	-	RT-CH-110a.1		

				PRO F	PRO FORMA		GACY CENO	vus	GLOBAL FRAMEWORK INDICATORS		
KEY PERFORMANCE INDICATOR	UNIT OF MEASURE	2022	2021	2020	2019	2020	2019	2018	SASB	IPIECA	LEVEL OF ASSURANCE
SO <sub>2</sub> emissions <sup>(AQ-1)</sup> (AQ-2)	Tonnes	12,308	9,125	-	-	4,791	4,179	1,935			
Exploration & production	Tonnes	7,308	7,659	-	-	4,791	4,179	1,935	EM-EP-120a.1		
Midstream (GHG-8)	Tonnes	0	0	-	-	NA	NA	NA	EM-MD-120a.1		
Refining & marketing	Tonnes	5,000	1,465	-	-	NA	NA	NA	EM-RM-120a.1		
Chemicals	Tonnes	0	0	-	-	NA	NA	NA	RT-CH-120a.1		
NO <sub>x</sub> emissions <sup>(AQ-1)</sup>	Tonnes	16,852	16,535	-	-	9,552	8,991	9,285			
Exploration & production	Tonnes	14,721	15,033	-	-	9,552	8,991	9,285	EM-EP-120a.1		
Midstream (GHG-8)	Tonnes	6	4	-	-	NA	NA	NA	EM-MD-120a.1		
Refining & marketing	Tonnes	1,421	1,422	-	-	NA	NA	NA	EM-RM-120a.1		
Chemicals	Tonnes	89	77	-	-	NA	NA	NA	RT-CH-120a.1		
Volatile organic compounds (VOCs) (AQ-1)	Tonnes	7,400	8,004	-	-	5,783	2,802	3,224			
Exploration & production	Tonnes	5,533	6,556	-	-	5,783	2,802	3,224	EM-EP-120a.1		
Midstream (GHG-8)	Tonnes	2	49	-	-	NA	NA	NA	EM-MD-120a.1		
Refining & marketing	Tonnes	1,807	1,363	-	-	NA	NA	NA	EM-RM-120a.1		
Chemicals	Tonnes	58	35	-	-	NA	NA	NA	RT-CH-120a.1		
Total particulate matter (TPM) <sup>(AQ-1)</sup>	Tonnes	716	713	-	-	247	193	189			
Exploration & production	Tonnes	462	467	-	-	247	193	189	EM-EP-120a.1		
Midstream (GHG-8)	Tonnes	0	0	-	-	NA	NA	NA	EM-MD-120a.1		
Refining & marketing	Tonnes	201	198	-	-	NA	NA	NA	EM-RM-120a.1		
Chemicals	Tonnes	52	47	-	-	NA	NA	NA	RT-CH-120a.1		
			E	NERGY USE		1					
Energy use <sup>(EU-1) (EU-2)</sup>	Millions GJ	308	316	-	-	153	147	146		CCE-6	
Exploration & production	Millions GJ	251	265	-	-	153	147	146		CCE-6	
Midstream	Millions GJ	0	0	-	-	-	-	-		CCE-6	
Refining & marketing (EU-1)	Millions GJ	53	47	-	-	-	-	-		CCE-6	
Chemicals	Millions GJ	3	3	-	-	-	-	-	RT-CH-130a.1		

				PRO FORMA		LEGACY CENOVUS			GLOBAL FRAMEWORK INDICATORS		
KEY PERFORMANCE INDICATOR	UNIT OF MEASURE	2022	2021	2020	2019	2020	2019	2018	SASB	IPIECA	LEVEL OF ASSURANCE
	<b>'</b>		WATE	R STEWARD	SHIP						
Fresh water withdrawal as a percentage of total water withdrawn	Percentage	23	20	-	-	5	5	NPR		ENV-1	
Total fresh water withdrawn <sup>(WS-1)</sup> (WS-2) (WS-3)	10 <sup>3</sup> m <sup>3</sup>	37,567	34,738	33,149	32,396 <sup>(WS-13)</sup>	3,450	3,147	2,800			Limited
Exploration & production (WS-3)	10 <sup>3</sup> m <sup>3</sup>	28,342	26,047	23,645	22,334	3,450	3,147	2,800	EM-EP-140a.1		
Oil sands <sup>(WS-4)</sup>	10 <sup>3</sup> m <sup>3</sup>	3,342	3,355	3,873	3,696	3,283	2,921	2,295	EM-EP-140a.1		
Lloydminster thermals <sup>(WS-4)</sup>	10 <sup>3</sup> m <sup>3</sup>	23,203	20,998	18,530	17,210	NA	NA	NA	EM-EP-140a.1		
Midstream	10 <sup>3</sup> m <sup>3</sup>	0	0	-	-	0	NPR	NPR		ENV-1	
Refining & marketing	10 <sup>3</sup> m <sup>3</sup>	8,159	7,755	8,478	9,013 <sup>(WS-13)</sup>	NA	NA	NA	EM-RM-140a.1		
Recycled	Percentage	55	51	-	-	NA	NA	NA	EM-RM-140a.1		
Chemicals	10 <sup>3</sup> m <sup>3</sup>	1,066	936	1,026	1,049	NA	NA	NA	RT-CH-140a.1		
Total fresh water consumed <sup>(WS-1)</sup> (WS-2)	10 <sup>3</sup> m <sup>3</sup>	36,070	33,302	-	-	3,352	3,019	2,611			
Exploration & production	10 <sup>3</sup> m <sup>3</sup>	28,161	25,945	-	-	3,352	3,019	2,611	EM-EP-140a.1		
Midstream	10 <sup>3</sup> m <sup>3</sup>	0	0	-	-	0	NPR	NPR		ENV-1	
Refining & marketing	10 <sup>3</sup> m <sup>3</sup>	6,843	6,421	-	-	NA	NA	NA	EM-RM-140a.1		
Chemicals	10 <sup>3</sup> m <sup>3</sup>	1,066	936	-	-	NA	NA	NA	RT-CH-140a.1		
Volume of produced water <sup>(WS-5) (WS-6) (WS-7) (WS-8)</sup>	10 <sup>3</sup> m <sup>3</sup>			-	-						
Exploration & production	10 <sup>3</sup> m <sup>3</sup>	100,870	109,160	-	-	56,763	52,398	50,816	EM-EP-140a.2		
Discharged	Percentage	3	2	-	-	0	0	0	EM-EP-140a.2		
Injected	Percentage	39	38	-	-	20	20	19	EM-EP-140a.2		
Recycled	Percentage	58	60	-	-	80	80	81	EM-EP-140a.2		
Volume of flowback (WS-9)	10 <sup>3</sup> m <sup>3</sup>			-	-						
Exploration & production	10 <sup>3</sup> m <sup>3</sup>	21	30	-	-	2	1	35	EM-EP-140a.2		
Discharged	Percentage	0	0	-	-	0	0	0	EM-EP-140a.2		
Injected	Percentage	100	100	-	-	100	100	100	EM-EP-140a.2		
Recycled	Percentage	0	0	-	-	0	0	0	EM-EP-140a.2		
Fresh water intensity <sup>(WS-1)</sup> (WS-2)	bbls/BOE	0.66	0.60	-	-	0.13	0.12	0.10		ENV-1	
Exploration & production (WS-3)	bbls/BOE	0.68	0.59	-	-	0.13	0.12	0.10		ENV-1	

				PRO FORMA		LEGACY CENOVUS			GLOBAL FRAMEWORK INDICATORS		
KEY PERFORMANCE INDICATOR	UNIT OF MEASURE	2022	2021	2020	2019	2020	2019	2018	SASB	IPIECA	LEVEL OF ASSURANCE
Oil sands <sup>(WS-4)</sup>	bbls/BOE	0.12	0.12	0.15	0.15	0.15	0.14	0.11		ENV-1	Limited
Lloydminster thermals (WS-4)	bbls/BOE	4.00	3.71	3.85	3.62	NA	NA	NA		ENV-1	Limited
Midstream	bbls/BOE	0.00	0.00	-	-	0	NPR	NPR		ENV-1	
Refining & marketing	bbls/BOE	0.56	0.57	-	-	NA	NA	NA		ENV-1	
Chemicals	bbls/BOE	6.61	6.83	-	-	NA	NA	NA		ENV-1	
Percentage of fresh water withdrawn in regions with high or extremely high baseline water stress <sup>(WS-1)</sup> (WS-2) (WS-3) (WS-10)	Percentage	2	2	-	-	0 <sup>(WS-10)</sup>	0 <sup>(WS-10)</sup>	NPR			
Exploration & production	Percentage	0	0	-	-	0 <sup>(WS-10)</sup>	0 <sup>(WS-10)</sup>	NPR	EM-EP-140a.1		
Midstream	Percentage	0	0	-	-	0	0	NPR		ENV-1	
Refining & marketing	Percentage	0	0	-	-	NA	NA	NA	EM-RM-140a.1		
Chemicals	Percentage	53	54	-	-	NA	NA	NA	RT-CH-140a.1		
Percentage of fresh water consumed in regions with high or extremely high baseline water stress <sup>(WS-1)</sup> (WS-2) (WS-3) (WS-10)	Percentage	2	2	-	-	0 <sup>(WS-10)</sup>	0 <sup>(WS-10)</sup>	NPR			
Exploration & production	Percentage	0	0	-	-	0 <sup>(WS-10)</sup>	0 <sup>(WS-10)</sup>	NPR	EM-EP-140a.1		
Midstream	Percentage	0	0	-	-	0	0	NPR		ENV-1	
Refining & marketing	Percentage	0	0	-	-	NA	NA	NA	EM-RM-140a.1		
Chemicals	Percentage	53	54	-	-	NA	NA	NA	RT-CH-140a.1		
Hydrocarbon content in water discharged to environment (WS-5)	Tonnes	32	38	-	-	0	0	NPR	EM-EP-140a.2		
Hydraulically fractured wells for which there is public disclosure of all fracturing fluid chemicals used <sup>(WS-11)</sup>	Percentage	100	100	-	-	100	100	100	EM-EP-140a.3		
Hydraulically fractured wells where ground or surface water quality deteriorated compared to a baseline <sup>(WS-12)</sup>	Percentage	0	0	-	-	0	0	NPR	EM-EP-140a.4		
			BI	ODIVERSITY	,						
Reclaimed land <sup>(LD-1)</sup>	Acres	2,889	3,611	-	-	1,436	1,557	2,162			
Area under reclamation (LD-2)	Acres	17,609	14,920	-	-	9,748	8,538	8,997			
Well site reclamation certificates received <sup>(LD-3)</sup>	Number	537	421	473	561	144	171	288			Limited
Total caribou habitat area under restoration - life to date (LD-4)	Acres	232,869	198,899	-	-	164,530	164,530	NPR	EM-MD-160a.3		Limited
Total area disturbed in caribou habitat <sup>(LD-4)</sup>	Acres	470,133	484,462	-	-	483,671	483,671	NPR	EM-MD-160a.3		Limited
Caribou habitat restoration ratio (LD-4)	Ratio	0.50	0.41	-	-	0.34	0.34	NPR	EM-MD-160a.3		Limited

				PRO FORMA		LEG	ACY CENO	vus	GLOBAL FRAMEWORK INDICATORS		
KEY PERFORMANCE INDICATOR	UNIT OF MEASURE	2022	2021	2020	2019	2020	2019	2018	SASB	IPIECA	LEVEL OF ASSURANCE
				SPILLS							
Spills > 1 bbl (SP-1) (SP-2)	Number	58	52	-	-	9 <sup>(SP-3)</sup>	9	8	EM-EP-160a.2; EM-MD-160a.4		
Exploration & production	Number	39	37	-	-	9 <sup>(SP-3)</sup>	9	8	EM-EP-160a.2		
Midstream	Number	1	5	-	-	0	0	0	EM-MD-160a.4		
Refining & marketing	Number	18	10	-	-	NA	NA	NA		ENV-6	
Chemicals	Number	0	0	-	-	NA	NA	NA		ENV-6	
Estimated volume spilled for spills > 1 bbl (SP-1) (SP-2)	bbls	556	1,009	-	-	33 <sup>(SP-3)</sup>	240	436	EM-EP-160a.2; EM-MD-160a.4		
Exploration & production	bbls	362	197	-	-	33 <sup>(SP-3)</sup>	240	436	EM-EP-160a.2		
Midstream	bbls	6	102	-	-	0	0	0	EM-MD-160a.4		
Refining & marketing	bbls	188	710	-	-	NA	NA	NA		ENV-6	
Chemicals	bbls	0	0	-	-	NA	NA	NA		ENV-6	
Volume recovered <sup>(SP-1) (SP-2) (SP-4)</sup>	bbls	172	906	-	-	22	212	NPR	EM-EP-160a.2; EM-MD-160a.4		
Exploration & production	bbls	143	119	-	-	22	212	NPR	EM-EP-160a.2		
Midstream	bbls	0	94	-	-	0	0	NPR	EM-MD-160a.4		
Refining & marketing	bbls	29	693	-	-	NA	NA	NA		ENV-6	
Chemicals	bbls	0	0	-	-	NA	NA	NA		ENV-6	
		INDI	GENOUS & C	OMMUNITY	( ENGAGEM	ENT					
Annual Indigenous business spend (IN-1)	\$ millions	395	221 <sup>(IN-2)</sup>	194 <sup>(IN-2)</sup>	244 <sup>(IN-2)</sup>	135 <sup>(IN-2)</sup>	143 <sup>(IN-2)</sup>	201 <sup>(IN-2)</sup>		SOC-14	Limited
Number of non-technical delays (IN-3)	Number	0	0	-	-	0	0	NPR	EM-EP-210b.2		
Duration of non-technical delays	Days	0	0	-	-	0	0	NPR	EM-EP-210b.2		
Total social investment <sup>(IN-4)</sup>	\$ millions	28.23	19.25	-	-	8.73	6.62	6.02		SOC-13	

				PRO F	ORMA	LEGACY CENOVUS			GLOBAL FRAMEWORK INDICATORS		
KEY PERFORMANCE INDICATOR	UNIT OF MEASURE	2022	2021	2020	2019	2020	2019	2018	SASB	IPIECA	LEVEL OF ASSURANCE
		C	OUR PEOPLE								
Voluntary employee turnover	Percentage	4.9	4.3	-	-	1.4	4	6.3 <sup>(OP-1)</sup>		SOC-6	
Total workforce <sup>(OP-2)</sup>	Number	7,432	8,786	-	-	3,001	3,189	3,042			
Employees	Number	5,998	6,470	-	-	2,413	2,361	2,264			
Contractors	Number	1,434	2,316	-	-	588	828	778			
Board gender diversity (OP-3)	Percentage	27	27	-	-	25	NPR	NPR		SOC-5	
Board diversity (OP-4)	Percentage	36	36	-	-	NPR	NPR	NPR		SOC-5	
Percentage female employees <sup>(OP-5)</sup>	Percentage	28	29	30	29	29	29	28		SOC-5	Limited
Leadership roles (OP-6)	Percentage	25	25	25	24	23	21	23		SOC-5	Limited
Top leadership roles (OP-7)	Percentage	19	21	19	17	19	19	20		SOC-5	
Percentage of employees covered by performance reviews	Percentage	100	100	-	-	100	100	100			
Management by objective appraisal	Percentage	100	100	-	-	100	100	100		GOV-2	
Multi-dimensional performance appraisal	Percentage	100	100	-	-	100	100	100		GOV-2	
			BUS	SINESS ETHIC	CS						
Business conduct investigations (BE-1)	Number	37	42	-	-	26	29	30		GOV-1	
Integrity Helpline intakes	Number	147	100	-	-	57	78	64		SOC-8	

KEY PERF	ORMANCE INDICATOR
NPR	Not previously reported
NA	Data not available relevant or considered material
-	No pro forma calculation completed
SAFETY &	
SA-1	Recordable incidents include lost time injuries, restricted-work injuries and medical aid injuries. Medical aid injuries require medical attention but do not result in an employee being absent from work.
SA-2	Total recordable incident rate, lost time incident frequency rate and near miss frequency rate are calculated as (statistic count x 200,000)/hours worked.
SA-3	Values restated due to updated classification of employee recordable incident.
SA-4	Adjusted SASB indicator unit of measure from rate to count.
SA-5	SASB indicator specific to Refining & Marketing standard, however we have reported for all operations.
SA-6	Average hours of health, safety and emergency response training calculated as (total qualifying training hours provided/total number of employees or contractors).
SA-7	Includes full-time employees only.
FINANCIA	
FI-1	For additional financial metrics, please see our financial statements on our website
FI-2	2018 amounts include the results of legacy conventional assets that were sold by Cenovus and were classified as a discontinued operation as required by International Financial Reporting Standards: see note 11 in Cenovus's 2018 Annual Consolidated Financial Statements.
FI-3	Capital expenditures before acquisition capital, which includes expenditures on property, plant and equipment, exploration and evaluation assets, assets held for sale and capitalized interest. Excludes dispositions. Excludes asset retirement obligations and amounts related to the Husky-CNOOC Madura
EI_A	Capital expenditures primarily related to the corp oil extraction project in 2021 and CO sequestration project in 2022 both at the Minpedese Ethanol Plant
FI-5	Includes revenue from ethanol sales corn oil sales (at the Minnedosa Ethanol Plant) and the renewable diesel portion of the ultra-low sulphur diesel sales
ΔΟΤΙΛΙΤΑ	METRICS
AM-1	Production and throughput volumes are disclosed in this report and converted to oil equivalents for use as the denominator of our emissions and water intensities. Reported upstream production values are derived from operated production data from Petrinex and as such will vary from and reduction values are derived in our financial statements which reflect each company's our article data statements which reflect each company is a statement each company is a statement each company is a statement each comp
AM-2	Oil includes oil production from our oil sands, conventional and thermal assets, natural gas liquids and condensate. For legacy Cenovus, condensate is converted using a factor of 0.86 barrels of oil equivalent (BOE) per barrel (bbl) of condensate. All other liquid conversions are on a
444.2	Natural are valumes have been converted to ROE on the basis of six million standard subis feet (AMAsef) to 1,000 bbls
AM-5	Foster Creak and Christing Lake expert excess electricity from their componentian facilities into the Alberta grid. Maggy wett beyrs (MM/b) are converted to BOE using a factor of 0.50 MM/b per BOE
AM-4 AM-5	Refining operating capacity is comprised of the Canadian upgrading and asphalt refinery operations and the Lima Refinery. Superior Refinery operating capacity will be included after operations resume. None of our facilities are located in or near areas of dense population, defined by SASB as urbanized areas with populations greater than 50.000.
AM-6	Ethanol is converted using a factor of 3.57 BOE per m <sup>3</sup> of ethanol.
CLIMATE	& GHG EMISSIONS
GHG-1	Scope 1 GHG emissions do not include emissions from biological sources, such as fermentation process emissions at ethanol plants, and emissions from some onsite transportation, which are unavailable and not material. Drilling and completions emissions are estimated and reported as required by inside transportations.
GHG-2	Proforma 2019 and 2020, as well as 2021 and 2022 absolute scope 1 & 2 emissions are adjusted for the carbon intensity numerator. We exclude drilling and completions emissions as there is no fuel production from these activities. We also exclude asphalt terminal emissions and throughout scope 1 & 2 emissions and the carbon intensity values.
GHG-3	Carbon emissions from the midstream facilities are excluded because the high throughput volumes would inappropriately understate our carbon intensity.
GHG-4	Values restated using updated data.
GHG-5	The scope 2 emissions for Lloydminster Upgrader and Lloydminster Ethanol Plant for their purchased steam (from Meridian Cogeneration Plant) are calculated based on the amount of steam energy each facility purchased from the cogeneration plant. The amount of steam energy is then converted into the equivalent of fuel gas that would have been combusted to generate the steam in a boiler based on 80% boiler thermal efficiency. The CO <sub>2</sub> emission factor based on fuel gas compositions and default CH <sub>4</sub> /N <sub>2</sub> O emission factors are then applied to fuel gas use to quantify the tonnes of CO <sub>2</sub> e.
GHG-6	Scope 1 & 2 GHG emissions on a net equity basis include Cenovus's working interest in all assets, including the non-operated assets identified in the Reporting Approach section of this report. Given the complexity of multiple joint venture arrangements in the conventional segment, a portion of the emissions from our non-operated facilities are estimated. Non-operated asset GHG data had not undergone third-party verification at the time of our ESG report publication and is subject to change.
GHG-7	All stationary combustion emissions from Cenovus's Canadian operations are subject to a carbon pricing regime. Non-stationary combustion emissions are subject to either carbon pricing or other, non-market-based regulations, depending on the facility. There are no emissions limiting regulations in the offshore Asia Pacific region where emissions from assets we operate are considered immaterial.
GHG-8	Legacy Cenovus midstream emissions were reported under Exploration & Production.
GHG-9	Rainbow Lake reports scope 2 import steam and electricity emissions separately from Heartland Generation who operates the co-located joint venture cogeneration facility.
GHG-10	Prior year emissions values have been restated. Update is primarily related to emissions from joint venture assets.

SCOPE 3	EMISSIONS
SC-1	Estimated for concrete and steel.
SC-2	Not considered material.
SC-3	Estimated based on a high-level screening assessment and not considered significant.
SC-4	Emission factors set to zero for asphalt as it is not combusted at end use and for ethanol as it is a renewable fuel.
SC-5	Included in Category 14.
SC-6	Scope 1 emissions are accounted for on a net equity basis.
SC-7	Volume extracted from the ground on a working interest basis, all produced products are fully combusted (bitumen, crude, NGLs, natural gas) except for bitumen used for asphalt.
SC-8	Volume of product moved through our refineries, all products are fully combusted except for asphalt and recycled diluent.
SC-9	Volume of refined product sold directly to retail and cardlock customers except for ethanol as it is a renewable fuel.
SC-10	Historical values restated to reflect updated methodology or improved data availability.
SC-11	As a result of improved data availability, previously disclosed scope 3 investments have been corrected to remove double counting of joint venture refineries.
AIR QUA	LITY
AQ-1	In some instances, SO <sub>2</sub> , NO <sub>x</sub> , VOCs and TPM emissions are reported as the total for all facilities where criteria air contaminant emissions have been reported to the regulator.
AQ-2	The increase in SO <sub>2</sub> volumes in 2022 is due to increased flaring at the Lloydminster Upgrader due to operational upsets.
ENERGY	USE
EU-1	In instances where data is not available, purchased electricity associated with retail stations and select offices is excluded.
EU-2	Energy calculations are based on fuel high heating value (HHV).
WATER S	TEWARDSHIP
WS-1	In alignment with Alberta and Saskatchewan regulations, water with <4,000 mg/L of total dissolved solids is referred to as non-saline or fresh. For consistency across operations, fresh water withdrawn for domestic use is not included in metrics.
WS-2	Cenovus's historical volumes (2016-2019) have been restated to exclude domestic water volumes, to align with the updated reporting method.
WS-3	Does not include fresh industrial waste water.
WS-4	Drilling and completions volumes are excluded from total fresh water withdrawn volumes and fresh water intensity values.
WS-5	Produced water is discharged at our offshore Atlantic operations, in accordance with regulatory limits for hydrocarbon content.
WS-6	At onshore operations, we inject produced water that is unusable due to composition. It is disposed via deep wells.
WS-7	Recycled and injected produced water percentages are calculated as per AER Directive 81, which defines injected as disposed.
WS-8	Historical (2016-2019) recycled and injected produced water percentages have been restated to align with the AER's updated Directive 81.
WS-9	Flowback is defined as the recovered hydraulic fracturing fluid that returns to the surface during hydraulic fracturing operations which is often mixed with produced water.
WS-10	Baseline Water Stress as classified by the World Resources Institute's Aqueduct Water Risk Atlas tool. Fresh water withdrawal at the Minnedosa Ethanol Plant is from a high/extremely high water stress area. Our Foster Creek and Christina Lake assets are located in areas unrated for Baseline Water Stress.
WS-11	Hydraulic fracturing chemicals used are disclosed publicly through fracfocus.ca.
WS-12	Currently, based on available water monitoring at sites, there have been no detections of hydrocarbons or deterioration in water quality over time related to our production.
WS-13	Values restated to include volumes that were previously not captured. The percent change in volumes is 0.1% of the total and 0.4% of the refining & marketing fresh water volumes.

BIODIVER	SITY
LD-1	Reclaimed land is the associated land for sites where reclamation certificates were received in the reporting period, demonstrating regulatory approval that the site have been returned to an equivalent land capability.
LD-2	A default of 4.05 acres per site is used.
LD-3	Metric is determined by the count of reclamation certificates granted by the provincial regulator as no global reporting framework methodologies exist. Reflects Alberta, Saskatchewan and British Columbia operations only.
LD-4	Restoration ratio is calculated as the total habitat area under restoration treatment divided by the total area disturbed in the Cold Lake range. Total caribou habitat area under restoration includes completed projects as well as those actively undergoing restoration efforts to restore ecological functionality, biodiversity and productivity of disturbed lands. Overlapping disturbance is subtracted from our restored area. Data represents the Cold Lake caribou range only.
SPILLS	
SP-1	Representative of hydrocarbon spills only.
SP-2	Methodology changed in 2020 to align with SASB methodology. Prior year values have been restated.
SP-3	Values restated due to improvements in aligning legacy systems.
SP-4	Volumes recovered during initial response or within seven days; additional volumes are remediated over the longer term.
INDIGENO	OUS & COMMUNITY ENGAGEMENT
IN-1	All goods and/or services provided by either an Indigenous-owned company (51% or more ownership) or an Indigenous joint venture. A joint venture is defined as a non-Indigenous company which has a joint venture/agreement/MOU with an Indigenous community or individual. Figures are based on companies or communities self-disclosing that their businesses are Indigenous.
IN-2	Values restated to reflect changes in self-disclosure of Indigenous businesses.
IN-3	Non-technical delays are defined by SASB as shutdowns and project delays including, but not limited to, those resulting from pending regulatory permits or other political delays, community or stakeholder resistance or protest, or armed conflict.
IN-4	Total value of social investments as audited by the London Benchmarking Group Canada. Social investments include cash, employee volunteer time during work hours and in-kind contributions.
OUR PEO	PLE
OP-1	Methodology change in 2018 to include voluntary retirement.
OP-2	Employee total is based on headcount and includes part-time employees. 2021 data has been updated to reflect company-wide operations.
OP-3	Reflective of women on the Board.
OP-4	In 2021, the Board revised the existing aspirational target included in the Board Diversity Policy to have at least 40% of non-management directors be represented by women, Indigenous Peoples, persons with disabilities and members of visible minorities, with at least 30% representation by women, by year-end 2025.
OP-5	Reflects company-wide operations. 2021 data has been updated to reflect company-wide operations.
OP-6	Cenovus leadership roles include employees at the Supervisor, Team Lead, Manager and Director or equivalent level, where equivalent is determined when the employee is responsible for directly managing employees or contractors (i.e., have at least one direct report). Leaders who manage service providers only are excluded. 2021 data has been updated to reflect company-wide operations.
OP-7	Cenovus top leadership roles include the President & CEO, Executive Vice-Presidents, Senior Vice-Presidents, Vice-Presidents and Chief positions. 2021 data has been updated to reflect company-wide operations.
BUSINESS	ETHICS
BE-1	Investigations can include (but are not limited to) compliance with laws and regulations, conflict of interest, fraud, confidentiality and disclosure, and other potential breaches of policies and practices.

# 10 APPENDIX





CENOVUS ENERGY 2022 ENVIRONMENTAL, SOCIAL & GOVERNANCE REPORT | 89

# **OVERVIEW & APPROACH**

## **REPORTING APPROACH**

#### Scope and boundary

This 2022 ESG report communicates our ESG performance for the period January 1 to December 31, 2022 and includes references to relevant actions undertaken by Cenovus in the first part of 2023.

Unless otherwise noted, our data was collected and reported for all facilities where Cenovus had operational control throughout 2022 (reported on a gross operated basis and not adjusted for ownership share) and does not include joint-venture interests operated by other organizations in 2022. Air emissions, energy and activity metrics data are reported for the assets where Cenovus had operational control as at December 31, 2022. We are reporting our scope 1 and 2 emissions on both a gross operated and, to support our GHG reduction target and ambition, net equity basis. Scope 3 emissions are also disclosed on a net equity basis.

In this 2022 ESG report, Cenovus has adopted methodology to adjust our 2019 climate and GHG emission baseline to reflect material asset changes. Estimated emissions from assets acquired will be added to our 2019 baseline and estimated emissions from divested assets will be excluded from the same. This methodology better reflects actual emissions performance rather than fluctuations associated with acquisition and divestiture activity. In this 2022 ESG report, our 2019 baseline figure was updated to reflect the sale of the Tucker asset<sup>1</sup>, 100% ownership of Sunrise and Toledo and full operations at Superior. All financial data is reported in Canadian dollars and excludes discontinued operations. Details of the company's intercorporate relationships are provided in Cenovus's 2022 Annual Information Form.

#### Reportable segments and reporting frameworks

Our reporting is guided by principles of accuracy, balance, clarity, comparability, reliability and timeliness. Cenovus monitors the development of external ESG reporting frameworks and supports efforts to reach consensus and standardize key performance indicators.

For financial reporting purposes, Cenovus has identified three reportable segments, which can be found in our 2022 MD&A. The Upstream segment includes Oil Sands, Conventional and Offshore, the Downstream segment includes Canadian Manufacturing and U.S. Manufacturing and the Corporate and Eliminations segment captures company wide costs and activity. However, for the purposes of this report, we have aligned our business segments with the Value Reporting Foundation's SASB standards most relevant to our operations.

All partner operated assets are excluded from our reported metrics, except where we report scope 1, 2 and 3 emissions on a net equity basis. These partner operated assets as of December 31, 2022, are the gas plant at the Liwan Gas Project offshore China and the BD Project offshore Indonesia, both operated by China National Offshore Oil Corporation (CNOOC), the Terra Nova oil field in the Atlantic region operated by Suncor Energy Inc., the Wood River and Borger refineries operated by Phillips 66, the Toledo Refinery which was operated by BP Products North America Inc., and the Rainbow Lake cogeneration plant, operated by Heartland Generation.



# Our alignment with SASB standards, unless otherwise noted, is as follows:

## Extractives & Minerals Processing – Oil & Gas – Exploration & Production (E&P) Standard

- Onshore includes the development and production of heavy oil and bitumen in northern Alberta including the Foster Creek, Christina Lake, Sunrise and Tucker<sup>1</sup> oil sands projects, as well as emerging assets that are not yet producing. It also includes the Lloydminster thermal projects in Saskatchewan, conventional heavy oil assets in Alberta and Saskatchewan, and conventional oil and natural gas production, including processing operations, in the Deep Basin and other parts of Western Canada.
- Offshore includes the offshore operations, exploration and development activities in Atlantic Canada and the drilling and completions operations in the Asia Pacific regions of China and Indonesia.

## Extractives & Minerals Processing – Oil & Gas – Midstream Standard

- The crude-by-rail terminal in Bruderheim, Alberta.
- Pipeline terminals in Cold Lake, Hardisty and Lloydminster, Alberta.

# Extractives & Minerals Processing – Oil & Gas – Refining & Marketing (R&M) Standard

- Canadian Manufacturing, which includes our upgrader and asphalt refinery in Lloydminster on the Alberta-Saskatchewan border.
- U.S. Manufacturing, which includes the refineries in Lima, Ohio and Superior, Wisconsin. The Superior Refinery restarted in March 2023.
- Canadian refined products, which includes the Canadian commercial and wholesale channels.

#### **Resource Transformation – Chemicals Standard**

• The ethanol plants in Lloydminster, Saskatchewan and Minnedosa, Manitoba.



#### Ipieca

Where there is no guidance within the SASB standards, we leverage the sustainability reporting guidance for the oil and gas industry published by Ipieca. As active members of Ipieca, we participate on several committees with peers to monitor reporting trends and improve our environmental and social performance.



#### TCFD

Demonstrating our commitment to climate-related financial disclosure, we have been a supporter of the Task Force on Climate-related Financial Disclosures (TCFD) since 2020, after aligning with the recommendations in 2018. Our report structure follows TCFD's disclosure framework by including governance, strategy, risk management, and metrics and targets, within each of our five ESG focus areas, providing reporting consistency and transparency for our investors and other stakeholders.

#### Third-party assurance

We have obtained third-party assurance for select indicators reported in each of our ESG reports since 2009. This helps us build credible reporting in which our stakeholders can have confidence. We continue to look for ways to enhance the credibility of our reporting systems and the accuracy of our data.

For this report, PricewaterhouseCoopers LLP (PwC) provided assurances on 22 indicators including reasonable assurance over gross operated scope 1 and 2 GHG emissions. Refer to the independent assurance statement on p. 106. Through our membership in London Benchmarking Group Canada, we undergo a yearly audit of our social investment portfolio to receive a reasonable level of assurance. The audit validates the total value of our social investment cash and in-kind contributions, and employee volunteer time during working hours.

#### ESG materiality & target setting

Cenovus's combination with Husky, which closed on January 1, 2021, significantly changed our portfolio. In early 2021, we conducted a detailed ESG materiality assessment to identify the focus areas with the most impact to our combined business and considered the most important by our stakeholders. The assessment also factored in the external ESG trends of greatest significance to our industry. This approach helps us prioritize and allocate resources and focus our ESG disclosure.

Following the materiality assessment, we established targets in each of our focus areas that we believe are meaningful and ambitious yet achievable. These targets and ambition have been endorsed by the executive leadership team and Board of Directors. As the world transitions to a lower-carbon future and our investors increasingly seek a balance between strong financial, operational and ESG performance, our targets set out how we aim to improve our ESG performance and help our business remain resilient over the longer term. To learn more about our materiality assessment and target setting process, refer to our 2020 ESG Report.

We are transparent in reporting our strategy, performance and progress against our targets through annual disclosure. We remain committed to delivering strong business results and long-term financial resilience while operating in a responsible and respectful way.

## **STAKEHOLDER ENGAGEMENT**

As we build towards our ESG targets, we incorporate a robust approach to stakeholder engagement to ensure we are making meaningful connections with those who are affected by our business operations.

	INVESTORS	OUR WORKFORCE	COMMUNITIES	INDIGENOUS GROUPS	GOVERNMENT AND REGULATORY BODIES	CUSTOMERS AND SUPPLIERS
KEY TOPICS <sup>1</sup>	<ul> <li>Emissions reductions and Pathways Alliance</li> <li>Transition risk</li> <li>Environmental and social impact</li> <li>Governance and executive compensation</li> <li>Transparency/external reporting</li> <li>Safety and operational performance</li> <li>Financial discipline and capital allocation</li> <li>Lobbying activities</li> </ul>	<ul> <li>Inclusion &amp; diversity</li> <li>Health, safety, and the environment</li> <li>Employee giving and volunteering</li> <li>Career development and enhancement</li> <li>Company strategy</li> <li>Ethics and compliance</li> </ul>	<ul> <li>Clean air, water and natural environment</li> <li>Safety</li> <li>Emergency response</li> <li>Helping young people prepare for their futures</li> <li>Community investment and support</li> </ul>	<ul> <li>Reconciliation and understanding</li> <li>Social and economic inclusion</li> <li>Indigenous employment</li> <li>Community investment and partnerships</li> <li>Potential impacts to Aboriginal and treaty rights</li> </ul>	<ul> <li>Environment and emissions reduction</li> <li>Energy supply and security</li> <li>Taxation and investment incentivization</li> <li>Economic development and job creation</li> <li>Regulation and policy enhancement</li> </ul>	<ul> <li>Performance expectations</li> <li>Cost efficiencies</li> <li>Alignment with climate, safety and diversity expectations</li> </ul>
ENGAGEMENT	<ul> <li>Annual Meeting of Shareholders</li> <li>Quarterly analyst calls</li> <li>SEC and TSX filings</li> <li>Annual ESG report</li> <li>Investor presentations and Investor Days</li> <li>Regular investor outreach and engagement</li> </ul>	<ul> <li>Organizational health surveys</li> <li>Performance management and career development</li> <li>Health and safety training</li> <li>Policy training</li> <li>Inclusion &amp; diversity networks</li> <li>Town halls</li> <li>Cenovus Cares – employee giving &amp; volunteering program</li> <li>Integrity Helpline</li> <li>Wellness programs</li> </ul>	<ul> <li>Cenovus Cares – employee giving &amp; volunteering program</li> <li>Integrity Helpline</li> <li>Websites, media and social media</li> <li>Cenovus Energy STEM scholarships</li> <li>Student and new grad programs</li> <li>Community consultations and meetings</li> </ul>	<ul> <li>Indigenous Housing Initiative</li> <li>Indigenous business spend</li> <li>Employee Indigenous awareness training</li> <li>Indigenous scholarship program</li> <li>Project updates and formal consultation on activities</li> </ul>	<ul> <li>Advocacy and policy development</li> <li>Regulatory audits and compliance</li> <li>Industry and trade association representation</li> </ul>	<ul> <li>Contract negotiations</li> <li>Detailed supplier enrolment process</li> <li>Project management</li> <li>Supplier meetings</li> </ul>

1 The key topics and engagement activities listed are high-level examples and not a fulsome list.

# UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

We recognize businesses have a critical role in providing solutions that contribute to "a universal call to action to end poverty, protect the planet and improve the lives and prospects of everyone, everywhere", as directed by the United Nations' (UN) 2030 Agenda for Sustainable Development. Our business activities contribute to many of the UN's Sustainable Development Goals (SDGs). In this table we showcase the goals most aligned with our ESG targets and ambitions. Find more details on our website. We will continue to evaluate how we can further incorporate the SDGs into our business activities over time, along with enhancing our role in contributing to this global agenda.

FOCUS AREA	TARGET/AMBITION	SELECTED SDG	OUR ACTIONS
Climate & GHG emissions	Reduce absolute GHG emissions by 35% by year-end 2035.	Affordable and Clean Energy	• We have established targets and plans to achieve them to position us to thrive in a lower-carbon future and continue to provide energy the world needs to make people's lives better.
	Reach long-term ambition for net zero emissions by 2050.		<ul> <li>In addition to participating in several other collaborations and partnerships that advance clean energy innovation, we jointly formed the Pathways Alliance with our largest oil sands peers. Working collectively with governments and innovators, Pathways has a vision to achieve net zero greenhouse gas emissions from oil sands operations by 2050.</li> </ul>
			• To support our water intensity target and water stewardship performance, we're developing water management plans for all operated assets by year-end 2025. Water management plans improve the way we source, transport, store, re-use and dispose of water. The plans, along with water expertise embedded throughout our business, identify and mitigate risks to freshwater quantity and quality in the planning, operating and late-life stages of our operations.
Water	Reduce fresh water intensity by	Clean water and sanitation	• Recycle water at our oil sands operations and the Lima Refinery and, where possible, in hydraulic fracturing, enhanced oil recovery and waterflood operations. At our Sunrise oil sands facility, we re-use wastewater from a neighbouring oil sands mine for our operations.
stewardship	operations by year-end 2030.		• Treat process water released back to the environment at our offshore and refining operations to meet stringent water quality requirements.
			<ul> <li>Invest in research to improve our water use efficiency. Where we withdraw fresh water for operations, we meet strict regulations to manage water quantity for all users. We monitor water availability risk in the areas where we operate and ensure our withdrawals are locally sustainable.</li> </ul>
			• Support collaborative water management, participating in watershed advisory councils and in regional water monitoring initiatives for our in situ oil sands operations. We take part in multi-operator water sharing agreements.

FOCUS AREA	TARGET/AMBITION	SELECTED SDG	OUR ACTIONS
Biodiversity	Reclaim 3,000 decommissioned well sites by year-end 2025.	Life on Land	<ul> <li>Commit to planting millions of native trees through our tree planting program.</li> <li>Conduct our reclamation and restoration activities efficiently, advancing the reclamation and subsequent restoration of functional terrain, and soil system and ecosystem processes. The restoration of larger geographical areas resulting from our area based closure approach can also increase habitat connectivity.</li> </ul>
	Restore more habitat than we use in the Cold Lake caribou range by year-end 2030.	15 mue	<ul> <li>Support a cross section of programs and initiatives that promote biodiversity conservation, including Alberta Ecotrust, Nature Conservation, Ottawa River Coalition, among others.</li> <li>Partner with the NCC on conservation efforts in Newfoundland and Labrador through the Futures in Conservation program, training the next generation of environmental leaders. Interns with the program are responsible for monitoring and surveying nature reserves through mapping and reporting tasks, helping organize biological inventories that create knowledge or local biodiversity on the lands they are working to conserve.</li> </ul>
Indigenous	Achieve a minimum of \$1.2 billion of spending with Indigenous businesses between 2019 and year-end 2025.	Reduced Inequalities	<ul> <li>Strive to reduce barriers for Indigenous companies and communities, and focus on providing more opportunities for social and economic inclusion.</li> <li>Partner with Indspire, an Indigenous national charity that invests in the education of First Nations, Inuit and Métis people. Our partnership will support initiatives across Canada aimed at enhancing education and recognizing the outstanding</li> </ul>
reconciliation	Attain Progressive Aboriginal Relations gold certification from the Canadian Council for Aboriginal Business by year-end 2025.		<ul> <li>After listening to Indigenous communities about their concerns and priorities, we created our Indigenous Housing Initiative, the largest community investment in Cenovus's history. This program helps address one of the most pressing issues facing Indigenous communities in Canada – inadequate housing that forces many families to live in overcrowded and sometimes unsafe conditions.</li> </ul>
	Increase women in leadership roles to 30% by year-end 2030.		• Ensuring diverse representation in student and new grad pool by partnering with universities and colleges, and providing scholarships to students working towards education that can support the energy industry.
Inclusion & diversity	Aspire to have at least 40% representation from designated groups among non-management directors, including at least 30% women, by year-end 2025.		<ul> <li>Our inclusion &amp; diversity networks are intended to foster a diverse and inclusive workplace and are open to all staff at Cenovus. These networks are voluntary, employee-led and executive-sponsored groups that focus on specific demographics within our company, and aim to:         <ul> <li>Increase awareness around key topics, trends and issues related to the network.</li> <li>Influence Cenovus's practices and programs to enhance the experience of all staff.</li> <li>Provide peer support for staff.</li> </ul> </li> </ul>



# **TCFD INDEX TABLE**

## GOVERNANCE

#### **Topic disclosures:**

- a. Describe the Board's oversight of climate related risks and opportunities
- Describe management's role in assessing and managing climate related risks and opportunities

#### **Reference**:

Board oversight p. 68 Management's role in ESG governance p. 69 Governance p. 22

## STRATEGY

Topic disclosures:

- a. Describe the climate-related risks and opportunities the organization has identified over the short, medium and long term
- b. Describe the impact of climate-related risks on the organization's businesses, strategy and financial planning
- c. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a two degree or lower scenario

#### **Reference:**

Risks & opportunities p. 26-32 Strategy p. 22-25 Scenario analysis p. 33-35

## **RISK MANAGEMENT**

#### Topic disclosures:

- a. Describe the organization's processes for identifying and assessing climate-related risks
- b. Describe the organization's processes for managing climate-related risks
- c. Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management

## METRICS AND TARGETS Topic disclosures:

- Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process
- b. Disclose scope 1, scope 2 and, if appropriate, scope 3 GHG emissions, and the related risks
- c. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets

#### **Reference:**

ESG data p. 78-81 Climate & GHG emissions progress p. 20-21 Metrics and targets p. 36

Risks p. 26-30

# SASB INDEX

ΤΟΡΙϹ	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE	CENOVUS DISCLOSURE
	Gross global Scope 1 emissions, percentage methane, percentage covered under emissions-limiting regulations	Quantitative	Metric tons CO <sub>2</sub> e (t), percentage (%)	EM-EP-110a.1 EM-MD-110a.1	2022 ESG report, Data table p. 78-80
GHG Emissions	Amount of gross global Scope 1 emissions from: (1) flared hydrocarbons, (2) other combustion, (3) process emissions, (4) other vented emissions, and (5) fugitive emissions	Quantitative	Metric tons CO <sub>2</sub> e (t)	EM-EP-110a.2	2022 ESG report, Data table p. 78
	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Discussion and analysis	n/a	EM-EP-110a.3 EM-MD-110a.2 EM-RM-110a.2 RT-CH-110a.2	2022 ESG report, Climate & GHG emission p. 20-25, 36-43 Limiting factors can be found in the Risk management and risk factors section of Cenovus's 2022 MD&A p. 65
Air Quality	Air emissions of the following pollutants: (1) NO <sub>x</sub> (excluding N <sub>2</sub> O), (2) SO <sub>x</sub> , (3) volatile organic compounds (VOCs), and (4) particulate matter (PM <sub>10</sub> )	Quantitative	Metric tons (t)	EM-EP-120a.1 EM-MD-120a.1 EM-RM-120a.1 RT-CH-120a.1	2022 ESG report, Data table p. 81
	Number of refineries in or near areas of dense population	Quantitative	Number	EM-RM-120a.2	2022 ESG report, Data table, footnote AM-5 p. 86
Energy Management	<ul> <li>(1) Total energy consumed, (2) percentage grid electricity,</li> <li>(3) percentage renewable, (4) total self-generated energy</li> <li>Discuss its efforts to reduce energy consumption and/or improve energy efficiency througout the production processes</li> </ul>	Quantitative Discussion and analysis	Gigajoules (GJ), percentage (%)	RT-CH-130a.1	<ul> <li>2022 ESG report, Data table p. 81</li> <li>Partial disclosure. Evaluating disclosure of percentage grid electricity, percentage renewable and total self-generated electricity for future reports.</li> <li>2022 ESG report, Climate &amp; GHG emissions p. 20-25, 36-43</li> </ul>

ΤΟΡΙϹ	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE	CENOVUS DISCLOSURE
	(1) Total fresh water withdrawn, (2) total fresh water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress (3) percentage recycled (Only applicable to R&M)	Quantitative	Thousand cubic metres (m³), percentage (%)	EM-EP-140a.1 EM-RM-140a.1 RT-CH-140a.1	2022 ESG report, Data table p. 82-83
	Volume of produced water and flowback generated; percentage (1) discharged, (2) injected, (3) recycled; hydrocarbon content in discharged water	Quantitative	Thousand cubic metres (m³), percentage (%), metric tons (t)	EM-EP-140a.2	2022 ESG report, Data table p. 82
Water & Wastewater	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	Quantitative	Number	EM-RM-140a.2 RT-CH-140a.2	Evaluating disclosure for future reports.
Management	Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and analysis	n/a	RT-CH-140a.3	2022 ESG report, Water stewardship p. 46-48
	Percentage of hydraulically fractured wells for which there is public disclosure of all fracturing fluid chemicals used	Quantitative	Percentage (%)	EM-EP-140a.3	2022 ESG report, Data table p. 83
	Percentage of hydraulic fracturing sites where ground or surface water quality deteriorated compared to a baseline The entity shall disclose its policies and practices related to ground and surface water quality management.	Quantitative Discussion and analysis	Percentage (%)	EM-EP-140a.4	2022 ESG report, Data table p. 83 2022 ESG report, Water stewardship p. 46-48
Waste & Hazardous Materials	Amount of hazardous waste generated, percentage recycled (Disclose the legal or regulatory framework(s) used to define hazardous waste and recycled hazardous waste, and the amounts of waste defined in accordance with each applicable framework.)	Quantitative	Metric tons (t), percentage (%)	EM-RM-150a.1 RT-CH-150a.1	Evaluating disclosure for future reports.
management	(1) Number of underground storage tanks (USTs), (2) number of UST releases requiring cleanup, and (3) percentage in states with UST financial assurance funds	Quantitative	Number, percentage (%)	EM-RM-150a.2	Evaluating disclosure for future reports.

ΤΟΡΙϹ	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE	CENOVUS DISCLOSURE
	Description of environmental management policies and practices for active sites/operations	Discussion and analysis	n/a	EM-EP-160a.1 EM-MD-160a.1	2022 ESG report, Biodiversity p. 51-54
	Number and aggregate volume of hydrocarbon spills, volume in Arctic, volume impacting shorelines with ESI rankings 8-10, and volume recovered	Quantitative	Number, barrels (bbls)	EM-EP-160a.2	2022 ESG report, Data table p. 84. Partial disclosure. Cenovus does not operate in the Arctic.
Diadiyowity Imposto	Number and aggregate volume of hydrocarbon spills, volume in Arctic, volume in Unusually Sensitive Areas (USAs), and volume recovered	Quantitative	Number, barrels (bbls)	EM-MD-160a.4	2022 ESG report, Data table p. 84. Partial disclosure. Cenovus does not operate in the Arctic.
biodiversity impacts	Percentage of (1) proved and (2) probable reserves in or near sites with protected conservation status or endangered species habitat	Quantitative	Percentage (%)	EM-EP-160a.3	Evaluating disclosure for future reports.
	Percentage of land owned, leased, and/or operated within areas of protected conservation status or endangered species habitat	Quantitative	Percentage (%) by acreage	EM-MD-160a.2	Evaluating disclosure for future reports.
	Terrestrial acreage disturbed, percentage of impacted area restored	Quantitative	Acres (ac), percentage (%)	EM-MD-160a.3	2022 ESG report, Data table p. 83 Scope of disclosure is related to the Cold Lake Caribou Range Habitat Restoration Program.
	Percentage of (1) proved and (2) probable reserves in or near areas of conflict	Quantitative	Percentage (%)	EM-EP-210a.1	Omitted due to lack of applicability.
Security, Human Rights & Rights of	Percentage of (1) proved and (2) probable reserves in or near Indigenous land	Quantitative	Percentage (%)	EM-EP-210a.2	Evaluating disclosure for future reports.
Indigenous People	Discussion of engagement processes and due diligence practices with respect to human rights, Indigenous rights, and operation in areas of conflict	Discussion and analysis	n/a	EM-EP-210a.3	2022 ESG report, Human Rights p. 71, Supplier Code of Business Conduct p. 74, and Indigenous reconciliation p. 57-60. Cenovus does not operate in areas of conflict.
Community Relations	Discussion of process to manage risks and opportunities associated with community rights and interests	Discussion and analysis	n/a	EM-EP-210b.1 RT-CH-210a.1	2022 ESG report, Local suppliers p. 74, Indigenous reconciliation p. 57-60, and Social investment. Cenovus will consider disclosing alignment with the International Finance Corporation's Performance Standards on Environmental and Social Sustainability in future reports.
	Number and duration of non-technical delays	Quantitative	Number, days	EM-EP-210b.2	2022 ESG report, Data table p. 84

ΤΟΡΙϹ	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE	CENOVUS DISCLOSURE
	<ol> <li>Total recordable incident rate (TRIR), (2) fatality rate,</li> <li>near miss frequency rate (NMFR), and (4) average hours of health, safety, and emergency response training for (a) full-time employees, (b) contract employees, and (c) short-service employees</li> </ol>	Quantitative	Rate, hours (h)	EM-EP-320a.1 RT-CH-320a.1	2022 ESG report, Data table p. 76. Fatality metric is disclosed as number not rate. Evaluating disclosure of rates for short-service employees for future disclosure.
	(1) Total recordable incident rate (TRIR) and (2) fatality rate for (a) direct employees and (b) contract employees	Quantitative	Rate	RT-CH-320a.1	2022 ESG report, Data table p. 76. Fatality metric is disclosed as number not rate.
Workforce Health & Safety	(1) Total recordable incident rate (TRIR), (2) fatality rate, (3) near miss frequency rate (NMFR) for (a) full-time employees and (b) contract employees	Quantitative	Rate	EM-RM-320a.1	2022 ESG report, Data table p. 76. Fatality metric is disclosed as number not rate.
	Discussion of management systems used to integrate a culture of safety throughout the exploration and production lifecycle	Discussion and analysis	n/a	EM-EP-320a.2 EM-RM-320a.2	2022 ESG report, Our safety culture p. 13-18
	Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks	Discussion and analysis	n/a	RT-CH-320a.2	2022 ESG report, Our safety culture p. 13-18
	Revenue from products designed for use-phase resource efficiency	Quantitative	Reporting currency	RT-CH-410a.1	Evaluating disclosure for future reports.
Product Design & Lifecycle	(1) Percentage of products that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances, (2) percentage of such products that have undergone a hazard assessment	Quantitative	Percentage (%) by revenue, percentage (%)	RT-CH.410b.1	Evaluating disclosure for future reports.
Management	Discussion of strategy to (1) manage chemicals of concern and (2) develop alternatives with reduced human and/or environmental impact	Discussion and analysis	n/a	RT-CH.410b.2	Evaluating disclosure for future reports.
	Percentage of products by revenue that contain genetically modified organisms (GMOs)	Quantitative	Percentage (%) by revenue	RT-CH-410c.1	Omitted due to lack of applicability.

ΤΟΡΙϹ	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE	CENOVUS DISCLOSURE
	Sensitivity of hydrocarbon reserve levels to future price projection scenarios that account for a price on carbon emissions	Quantitative	Million barrels (MMbbls), million standard cubic feet (MMscf)	EM-EP-420a.1	Evaluating disclosure for future reports.
	Percentage of Renewable Volume Obligation (RVO) met through: (1) production of renewable fuels, (2) purchase of "separated" renewable identification numbers (RIN)	Quantitative	Percentage (%)	EM-RM-410a.1	Evaluating disclosure for future reports.
Business Model Resilience	Estimated carbon dioxide emissions embedded in proved hydrocarbon reserves	Quantitative	Metric tons (t) CO <sub>2</sub> e	EM-EP-420a.2	Evaluating disclosure for future reports.
	Total addressable market and share of market for advanced biofuels and associated infrastructure	Quantitative	Reporting currency, percentage (%)	EM-RM-410a.2	Evaluating disclosure for future reports.
	Amount invested in renewable energy, revenue generated by renewable energy sales	Quantitative	Reporting currency	EM-EP-420a.3	2022 ESG report, Data table p. 77
	Discussion of how price and demand for hydrocarbons and/or climate regulation influence the capital expenditure strategy for exploration, acquisition, and development of assets	Discussion and analysis	n/a	EM-EP-420a.4	2022 ESG report, Climate & GHG emissions p. 26-27, 33-35
	Percentage of (1) proved and (2) probable reserves in countries that have the 20 lowest rankings in Transparency International's Corruptions Perception Index	Quantitative	Percentage (%)	EM-EP-510a.1	Omitted due to lack of applicability. Cenovus does not operate in any of the 20 lowest ranked countries in Transparency International's Corruption Perception Index (2022).
Business Ethics & Transparency	Total amount of monetary losses as a result of legal proceedings associated with price fixing or price manipulation Briefly describe the nature, context, and any corrective actions taken as a result of the monetary losses	Quantitative Discussion and analysis	Reporting currency	EM-RM-520a.1	2022 AIF, Legal proceedings and regulatory actions p. 52 Cenovus has not had any monetary losses as a result of legal proceedings associated with federal pipeline and storage regulations or with price fixing or price manipulation. 2022 ESG report, Our policy management and compliance approach p.70
	Description of the management system for prevention of corruption and bribery throughout the value chain	Discussion and analysis	n/a	EM-EP-510a.2	2022 ESG report, Our policy management and compliance approach p.70

ΤΟΡΙϹ	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE	CENOVUS DISCLOSURE
Competitive Behaviour	Total amount of monetary losses as a result of legal proceedings associated with federal pipeline and storage regulations The entity shall briefly describe the nature, context, and any corrective actions taken as a result of the monetary losses.	Quantitative Discussion and analysis	Reporting currency	EM-MD-520a.1	2022 AIF, Legal proceedings and regulatory actions p. 52 Cenovus has not had any monetary losses as a result of legal proceedings associated with federal pipeline and storage regulations or with price fixing or price manipulation.
Management of the Legal & Regulatory Environment	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	Discussion and analysis	n/a	EM-EP-530a.1 EM-RM-530a.1 RT-CH-530a.1	2022 MD&A, Risk management and risk factors p. 45-68 2022 ESG report, Risks & opportunities p. 26-32 Advocacy and memberships p. 73-74
	Process Safety Event (PSE) rates for Loss of Primary Containment (LOPC) of greater consequence (Tier 1)	Quantitative	Rate	EM-EP-540a.1	2022 ESG report, Data table p. 76
	Process Safety Incidents Count (PSIC), Process Safety Total Incident Rate (PSTIR), and Process Safety Incident Severity Rate (PSISR) The entity shall describe incidents with a severity rating of 1 or 2, including their root cause, outcomes, and corrective actions implemented in response.	Quantitative Discussion and analysis	Number, rate	RT-CH-540a.1	Partial disclosure. 2022 ESG report, Data table p. 76 Evaluating Discussion and analysis disclosure for future report.
Critical Incident Risk Management	Process Safety Event (PSE) rates for Loss of Primary Containment (LOPC) of greater consequence (Tier 1) and lesser consequence (Tier 2)	Quantitative	Rate	EM-RM-540a.1	2022 ESG report, Data table p. 76
	Number of reportable pipeline incidents, percentage significant	Quantitative	Number, percentage (%)	EM-MD-540a.1	Evaluating disclosure for future reports.
	Description of management systems used to identify and mitigate catastrophic and tail-end risks	Discussion and analysis	n/a	EM-EP-540a.2	2022 ESG report, Our safety culture p. 13-18
	Percentage of (1) natural gas and (2) hazardous liquid pipelines inspected	Quantitative	Percentage	EM-MD-540a.2	Evaluating disclosure for future reports.

ΤΟΡΙϹ	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE	CENOVUS DISCLOSURE
	Number of transport incidents The entity shall describe significant transport incidents, including their root causes, outcomes, and corrective actions implemented in response.	Quantitative Discussion and analysis	Number	RT-CH-540a.2	Evaluating disclosure for future reports.
	Challenges to Safety Systems indicator rate (Tier 3)	Quantitative	Rate	EM-RM-540a.2	Evaluating disclosure for future reports.
Critical Incident Risk Management	Discussion of management systems used to integrate a culture of safety and emergency preparedness throughout the value chain and throughout project lifecycles	Discussion and analysis	n/a	EM-MD-540a.4	2022 ESG report, Our safety culture p. 13-18
	Number of (1) accident releases and (2) non-accident releases (NARs) from rail transportation Disclosure shall include a discussion of processes, procedures, and strategies to manage non-accident and accident releases.	Quantitative Discussion and analysis	Number	EM-MD-540a.3	Evaluating disclosure for future reports.
	Discussion of measurement of Operating Discipline and Management System Performance through Tier 4 Indicators	Discussion and analysis	n/a	EM-RM-540a.3	Evaluating disclosure for future reports.

ΤΟΡΙϹ	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE	CENOVUS DISCLOSURE
	Production of: (1) oil, (2) natural gas, (3) synthetic oil, and (4) synthetic gas	Quantitative	Thousand barrels per day (Mbbl/day); Million standard cubic feet per day (MMscf/day)	EM-EP-000.A	2022 ESG report, Data table p. 77 Partial disclosure.
	Production by reportable segment	Quantitative	Cubic metres (m³) and/or metric tons (t)	RT-CH-000.A	2022 ESG report, Data table p. 77
Activity Metrics	Refining throughput of crude oil and other feedstocks	Quantitative	Barrels of Oil Equivalent (BOE)	EM-RM-000.A	2022 ESG report, Data table p. 77
	Total metric ton-kilometres of: (1) natural gas, (2) crude oil, and (3) refined petroleum products transported, by mode of transport	Quantitative	Metric ton (t) kilometres	EM-MD-000.A	Evaluating disclosure for future reports.
	Number of offshore sites	Quantitative	Number	EM-EP-000.B	2022 Cenovus AIF p. 11-13 identifies all offshore sites.
	Refining operating capacity	Quantitative	Million barrels per calendar day (MBPD)	EM-RM-000.B	2022 ESG report, Data table p. 77
	Number of terrestrial sites	Quantitative	Number	EM-EP-000.C	2022 Cenovus AIF p. 7-11, 13-16 outlines all onshore operations.

## **ADVISORY**

### **PROVED PLUS PROBABLE RESERVES**

Proved plus probable reserves disclosed in this report were evaluated by independent qualified reserves evaluators with an effective date of December 31, 2022. Readers are cautioned that the term reserves life index may be misleading, particularly if used in isolation. This measure is used for consistency with other oil and gas companies and does not reflect the actual life of the reserves. For a full discussion about Cenovus's 2022 proved plus probable reserves see the 2022 Annual Information Form filed for the year ended December 31, 2022.

### FORWARD-LOOKING INFORMATION

This report contains certain forward-looking statements and forward-looking information (collectively referred to as "forward-looking information") within the meaning of applicable securities legislation about our current expectations, estimates and projections about the future, based on certain assumptions made by us in light of our experience and perception of historical trends. Although Cenovus believes that the expectations represented by such forward-looking information are reasonable, there can be no assurance that such expectations will prove to be correct. Readers are cautioned not to place undue reliance on forward-looking information as actual results may differ materially from those expressed or implied.

Forward-looking information in this report is identified by words such as "achieve", "advance", "aim", "ambition", "anticipate", "build", "can", "commitment", "committed", "continue", "delivering", "develop", "ensure", "establishing", "estimate", "expect", "focus", "goals", "growing", "illustrative", "implementing", "improve",

"intend", "maintain", "opportunity", "plan", "position", "potential", "priority", "pursue", "reduce", "remain", "strategy", "target", "will" or similar words or expressions and includes suggestions of future outcomes, including, but not limited to, statements about: forecast commodity price and demand for oil, fuel, natural gas and other byproducts; Cenovus's five ESG focus areas, commitments, targets and ambition, including the governance, strategies, plans, and milestones for achieving them; GHG emissions, fresh water intensity, reclamation of well sites and habitat restoration, spend with Indigenous businesses and PAR certification, and women in leadership roles; representation of designated groups among non-management directors; CCS initiatives; reducing absolute net equity-based scope 1 and 2 GHG emissions by 35% by year-end 2035 from 2019 levels and long-term ambition to achieve net zero GHG emissions from operations by 2050 and related capital allocation; reaching our methane milestone by reducing absolute methane emissions in upstream operations by 80% by year-end 2028 from a 2019 baseline; our estimate of scope 3 emissions; our climate-related scenario analysis and long-range energy diversification scenarios; building homes in Indigenous communities nearest our oil sands operations; managing our assets in a safe, innovative and cost-efficient manner; safety improvement and safety culture; being a top-quartile performer in process and occupational safety; advancing and incorporating the SDGs into our business activities; enhancing the credibility of our reporting systems; delivering strong business results and long-term financial resilience while operating in a responsible and respectful way; climate-related risks; ESG-related opportunities and examples of Cenovus's actions and risk management

strategies; advancing the Pathways Alliance initiative, and leveraging potential government support to invest in lower-carbon and CCS technologies and infrastructure, including a CO<sub>2</sub> pipeline and sequestration hub project near Cold Lake; exploring opportunities in alternative end-use markets, including biofuels and asphalt; maintaining an asset portfolio that allows us to remain resilient and sustainable through the commodity price cycle and as the energy mix diversifies; positioning Cenovus to maintain a low cost structure; generating significant free funds flow and growing shareholder returns through a transition to a lower-carbon future; investing in projects based on US\$45 per barrel WTI; continuing advocacy efforts to help Canadian oil producers be seen as global suppliers of choice for responsibly produced oil; Cenovus's core portfolio remaining hydrocarbon-focused with continued investment in emissions reduction technologies and leveraging existing organizational competencies and talent to improve energy efficiency and reduce GHG emissions from our asset base; our risk management, corporate strategy and five year business plans, including embedding ESG and sustainability considerations therein; completing water management plans, including identification and mitigation of water risks, and integrating water sourcing and efficiency into our strategic plans and capital allocation planning; providing a physically and psychologically safe, respectful and healthy work environment; building a diverse, equitable and inclusive workplace; adding a diversity target beyond gender; updating our strategy to attract and retain female employees; incident and emergency response plans; continued participation with industry organizations and associations, including the Pathways Alliance; and the availability and cost of labour and services.

Developing forward-looking information involves reliance on a number of assumptions and other factors and consideration of certain risks and uncertainties, some of which are specific to Cenovus and others that apply to the industry generally. The factors or assumptions on which our forward-looking information is based include the following: our ability to access sufficient capital to pursue sustainability and development plans; our ability to develop, access or implement some or all of the technology necessary to efficiently and effectively operate assets and achieve expected future results, including in respect of climate and GHG emissions targets, milestones and ambition, and the commercial viability and scalability of emission reduction strategies and related technology and products; commodity pricing and demand for oil, fuel, natural gas and other byproducts; continuing collaboration with the government, Pathways Alliance and other industry organizations; assumptions related to our climate-related scenario analysis and long-range energy diversification scenarios; the accuracy and credibility of third-party data and assurance upon which we rely; our ability to attract and retain a diverse workforce of qualified staff in a timely and cost-efficient manner; our ability to grow capacity in areas of safety to effectively prevent and mitigate potential process safety events; the performance of assets, resources and equipment; applicable laws and government policies, including royalty rates, and global carbon policies and laws; the receipt, in a timely manner, of regulatory and partner approvals, as applicable; our ability to generate sufficient cash flow to meet current and future obligations; future production rates; our ability to implement capital projects or stages thereof in a successful and timely manner; the availability of Indigenous owned or operated businesses and our ability to retain them; and other risks and uncertainties described from time to time in the filings Cenovus makes with securities regulatory authorities, including the assumptions inherent in Cenovus's 2023 guidance available on cenovus.com.

The risk factors and uncertainties that could cause actual results to differ materially, some of which are specific to Cenovus and others that apply to the industry generally, include, but are not limited to: our ability to develop, access or implement some or all of the technology necessary to efficiently and effectively operate assets and achieve expected future results, including in respect of climate and GHG emissions targets, milestones and ambition, and the commercial viability and scalability of emission reduction strategies and related technology and products; the effectiveness of our risk management program; risks inherent in the operation of our business; our ability to successfully complete development plans; our ability to maintain positive relationships with communities neighboring our operations; and climate-related risks, including increased operating, capital or compliance costs, declining demand, reduced access to capital, liquidity and/or insurance coverage and lower market valuation, revenues or cash flows. In addition, there are risks that the effect of actions taken by us in achieving targets, commitments and ambitions for our ESG focus areas may have a negative impact on our existing business, growth plans and future results from operations.

Readers are cautioned that the foregoing lists are not exhaustive and are made as at the date hereof. Cenovus undertakes no obligation to update or revise any forward-looking information except as required by law. Events or circumstances could cause our actual results to differ materially from those estimated or projected and expressed in, or implied by, the forward-looking information. For a full discussion of Cenovus's material risk factors, assumptions and uncertainties, see "Risk Management and Risk Factors" and "Advisory" in our Management's Discussion and Analysis (MD&A) for the period ended March 31, 2023 and the risk factors described in other documents Cenovus files from time to time with securities regulatory authorities in Canada, available on SEDAR at sedar.com, and with the U.S. Securities and Exchange Commission on EDGAR at sec.gov, and on the Corporation's website at cenovus.com.



## INDEPENDENT ASSURANCE



Independent practitioner's reasonable and limited assurance report on selected performance metrics in Cenovus Energy Inc.'s 2022 Environmental, Social & Governance Report

To the Directors of Cenovus Energy Inc. (the "Company")

We have undertaken a reasonable assurance engagement over the performance metrics outlined in the accompanying Schedule 1 (the "reasonable assurance subject matter") as presented in the Company's 2022 Environmental, Social & Governance Report (the "2022 ESG Report") hosted on the Company's website<sup>1</sup>, for the year ended December 31, 2022.

We have also undertaken a limited assurance engagement over the performance metrics outlined in the accompanying Schedule 2 (the "limited assurance subject matter") as presented in the Company's 2022 ESG Report, for the year ended December 31, 2022.

The reasonable assurance subject matter and the limited assurance subject matter were prepared by the Company's management in accordance with the criteria as outlined in the accompanying Schedule 1 and Schedule 2, as well as the corporate boundaries and policies as outlined in the Company's 2022 ESG Report (together, the "applicable criteria").

#### Management's responsibility

Management is responsible for the preparation of the reasonable assurance subject matter and limited assurance subject matter in accordance with 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 and the limited assurance subject matter that are 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 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.

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.

PricewaterhouseCoopers LLP

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"PwC" refers to PricewaterhouseCoopers LLP, an Ontario limited liability partnership.



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.

Our reasonable assurance engagement included, among others, the following procedures performed:

- made inquiries 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;
- evaluated 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 reasonable assurance subject matter;
- obtained and inspected a sample of underlying documentation to support the reasonable assurance subject matter; and
- evaluated the disclosure and presentation of the reasonable assurance subject matter.

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, and Canadian Standards on Assurance Engagements 3000, Attestation Engagements Other Than Audits or Reviews of Historical Financial Information. These standards 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 material in accordance with the applicable criteria are likely to arise.

2

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Our limited assurance engagement procedures included, among others, the following procedures performed:

- made inquiries 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 reporting data for the limited assurance subject matter;
- obtained and inspected a limited sample of underlying documentation to support the limited assurance subject matter; and
- considered the disclosure and presentation of 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.

#### 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.

#### 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.

3

#### **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. 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.

Pricewaterhouse Coopers U.P.

Chartered Professional Accountants

Vancouver, British Columbia June 28, 2023

#### Schedule 1 The reasonable assurance subject matter

Performance metric	Level of Assurance	Scope	Criteria	Unit of Measure	2022 Value
Scope 1 GHG emissions	Reasonable	Company-wide (Operational Control)	SASB (EM-EP-110a.1/EM-MD- 110a.1/EM-RM-110a.1/RT-CH- 110a.1)	MMt CO2e	16.3
Scope 2 GHG emissions	Reasonable	Company-wide (Operational Control)	IPIECA (CCE-4)	MMt CO <sub>2</sub> e	1.8

#### Schedule 2 The limited assurance subject matter

Performance metric	Level of Assurance	Scope	Criteria	Unit of Measure	2022 Value
Scope 1 GHG emissions intensity	Limited	Company-wide	IPIECA (CCE-4)	t CO2e/MBOE	45.8
Scope 2 GHG emissions intensity	Limited	Company-wide	IPIECA (CCE-4)	t CO2e/MBOE	5.2
Upstream Production	Limited	Company-wide	SASB (EM-EP-000.A)	BOE/d	722,632
Downstream throughput	Limited	Company-wide	SASB (EM-EP-000.A)	BOE/d	249,876
Chemical production	Limited	Company-wide	SASB (RT-CH-000.A)	BOE/d	2,778
Total fresh water withdrawn	Limited	Company-wide	SASB(EM-EP-140a.1/EM- RM-140a.1)	10 <sup>3</sup> m <sup>3</sup>	37,567
Fresh water intensity	Limited	Oil Sands	IPIECA (ENV-1)	bbls/BOE	0.12
Fresh water intensity	Limited	Lloydminster Thermals	IPIECA (ENV-1)	bbls/BOE	4.00
Well site reclamation certificates received	Limited	Saskatchewan and Alberta	Internal	Number	537
Total caribou habitat are under restoration - life to date	Limited	Cold Lake Caribou Region	SASB(EM-MD-160a.3)	Acres	232,869
Total area disturbed in caribou habitat	Limited	Cold Lake Caribou Region	SASB(EM-MD-160a.3)	Acres	470,133
Caribou habitat restoration ratio	Limited	Cold Lake Caribou Region	SASB(EM-MD-160a.3)	Ratio	0.50
Annual Indigenous business spend	Limited	Company-wide	IPIECA (SOC-14)	\$ millions	395
Total recordable incident rate	Limited	Company-wide	SASB(EM-EP-320a.1/EM- RM-320a.1/RT-CH-320a.1)	Rate	0.28
Fatalities	Limited	Company-wide	SASB(EM-EP-320a.1/EM- RM-320a.1/RT-CH-320a.1)	Number	0
Process safety events Tier 1	Limited	Company-wide	SASB(EM-EP-540a.1/EM- RM-540a.1/RT-CH-540a.1)	Number	9
Process safety events Tier 2	Limited	Company-wide	SASB(EM-RM-540a.1)	Number	12
Lost time incident frequency	Limited	Company-wide	IPIECA (SHS-3)	Rate	0.05
Percentage of female employees	Limited	Company-wide	IPIECA (SOC-5)	Percentage	28%
Percentage of female employees – Leadership roles	Limited	Company-wide	IPIECA (SOC-5)	Percentage	25%

5
