Suncor Energy Inc. - Climate Change 2023

C0. Introduction

C0.1

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

Suncor is an integrated energy company headquartered in Calgary, Alberta, Canada. Suncor's long-life, low-decline asset base, strong balance sheet and integrated model, with our connection to end consumers through our retail network, sets us apart from our peers. These advantages are complemented by our long-standing approach to sustainability, operational excellence, capital discipline, technology and innovation. Suncor's integrated operations include oil sands development and upgrading, offshore oil and gas production, petroleum refining and product marketing under the Petro-Canada™ brand. As Canada's leading integrated energy company, we believe environmental and social progress and economic performance are intertwined and integral to our success.

The terms "Suncor" or "the company" in these responses are used herein for simplicity of communication and only mean that there is an affiliation with Suncor Energy Inc., without necessarily identifying the specific nature of the affiliation. The use of such terms in any response herein does not mean that they apply to Suncor Energy Inc. or any particular affiliate, and does not waive the corporate separateness of any affiliate. For further clarity, Suncor Energy Inc. does not directly operate or own assets in the United States.

C0.2

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

Reporting year

Start date
January 1 2022

End date
December 31 2022

Indicate if you are providing emissions data for past reporting years
Yes

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

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

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

C0.3

(C0.3) Select the countries/areas in which you operate.
Canada
United States of America

C0.4

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

C0.5

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

C-OG0.7

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

Row 1

Oil and gas value chain

Upstream

Downstream

Other divisions

Biofuels

Grid electricity supply from gas

Grid electricity supply from renewables

Carbon capture and storage/utilization

C0.8

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

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	CA8672241079
Yes, a Ticker symbol	XTSE: SU
Yes, a CUSIP number	867224107

C1. Governance

C1.1

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

Yes

C1.1a

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

Position of individual or committee	Responsibilities for climate-related issues
Other, please specify (Board/Executive board)	A key duty of the board is to review and monitor Suncor's purpose and objectives and the plans for achieving them. Suncor's management and the board have an annual meeting dedicated exclusively to strategy. The board reviews annual business plans and capital budget, thereby endorsing the strategies reflected in the plans, including capital outlook. It tests Suncor's strategy against various climate scenarios. In 2021 the board undertook a comprehensive review and update of Suncor's business strategy, resulting in several strategic objectives, including our objective to be a net-zero GHG emissions company by 2050. The EHS&SD Committee reviews and makes recommendations to the board regarding ESG-related strategic objectives and progress. The board monitors risks to Suncor's business, including Suncor's Enterprise Risk Management program. It ensures there are systems in place to identify, manage and monitor the principal risks of Suncor's business and to mitigate their impact. A principal risk is an exposure that has the potential to materially impact Suncor's ability to meet its strategic objectives. Suncor identified carbon as a principal risk to our business in 2016. Thus, carbon risk is already integrated into many aspects of our business planning and decision-making processes and requires the full board to review external trends, scenarios and risk management plans, at least annually. The EHS&SD Committee of the board reviews carbon risk quarterly. The Audit Committee reviews the governance of Suncor's ERM program and ensures each principal risk has an executive sponsor and is mapped to a board committee or the full board as appropriate for oversight.
Chief Executive Officer (CEO)	With respect to Suncor's strategic objectives the role of the executive leadership team (ELT) is to identify and implement corporate strategies, and effectively navigate risks and opportunities. The ELT establishes operational objectives, sets financial direction to support strategies and integrates climate change and other sustainability considerations into business planning and decision making. In 2022 Suncor reframed its project portfolio development and execution risk to emphasize strategic agility in its journey to net-zero, as climate-related risks and opportunities feature more prominently in our business planning and risk management activities. As a board member, Suncor's president and CEO is a key link between management and the board. The CEO keeps the board fully informed of the company's progress toward achieving its climate strategies and objectives and the board evaluates the performance of executive management toward these achievements.

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	Reviewing and guiding annual budgets Overseeing major capital expenditures Reviewing and guiding strategy Overseeing and guiding the development of a transition plan Monitoring the implementation of a transition plan	<Not Applicable>	One of the Board's major duties is to review with management Suncor's purpose, objectives and goals and the strategies and plans for achieving them. The Board also monitors Suncor's progress toward its strategic goals and plans, and revises Suncor's direction where warranted. The Board oversees Suncor's Enterprise Risk Management Program (the ''ERM Program''). In accordance with this program, the CEO and senior management undertake an enterprise-wide process to identify, assess and mitigate significant risks. The Board undertakes an annual review of those risks identified by the ERM program as principal risks (exposure that has the potential to impact or impair the ability of the company to meet its strategic objectives) which includes carbon risk. The Board monitors risk management actions for these risks throughout the year. In addition to Board oversight of risk management efforts, each principal risk is mapped to a Board Committee. Carbon risk is mapped to the Environment, Health, Safety and Sustainable Development Committee of the Board, and this committee receives quarterly reports from management. The Board is also responsible for ensuring Suncor has an effective strategic planning process, and on an annual basis reviews Suncor's annual business plan (including Suncor's annual capital budget) and in doing so endorses the strategies reflected in Suncor's long-range plan. The Governance Committee provides input on key strategic initiatives and long-range planning and budgeting process.

C1.1d

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

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	Environment, Social and Governance (ESG) is embedded in director recruitment, board evaluation and committee representation through the inclusion of EHS as part of Suncor's board skills matrix. The board's skills matrix was revised in 2021. One of the competencies and skills is in Environment Health and Safety (EHS), which is described as: significant experience in the areas of environment (including climate risk management), health and safety, including knowledge of industry regulations and a commitment to best practices for workplace safety. Twelve board members have competence in EHS. Suncor's board practices regarding performance evaluation and compensation consider ESG factors by: • evaluating senior executive performance annually against goals that support and reinforce our business objectives, including climate performance • considering our performance against enterprise-wide sustainability goals related to safety, environmental (including greenhouse gas emissions), to determine the annual incentive payment amounts for the CEO and the rest of the executives.	<Not Applicable>	<Not Applicable>

C1.2

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

Position or committee
Chief Sustainability Officer (CSO)

Climate-related responsibilities of this position
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities
<Not Applicable>

Reporting line
CEO reporting line

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

Please explain
The CSO integrates climate and sustainability matters into all areas of Suncor's business. The role serves as a link to the Environment, Health, Safety and Sustainable Development (EHS&SD) Committee of the board, which stewards carbon risk. The CSO plays a critical role in developing and championing Suncor's sustainability initiatives, positions and strategies, supporting public policy and government engagement, improving Indigenous and stakeholder relationships and collaboration, and navigating the evolving ESG reporting landscape. Through the CSO role, Suncor has elevated critical sustainability issues and climate leadership, underscoring the importance of these issues to our company.
Suncor's CSO helps to elevate sustainability considerations and ensure they are properly represented in decision-making. These positions report directly to our CEO and collaborates with other ELT colleagues in strategy, operations and other departments, with focused climate-related accountabilities, including:
• communicating Suncor's carbon risk and mitigation measures to the board
• translating the strategic sustainability direction from the board into corporate action
• serving as a direct link to the EHS&SD Committee of the board who assess the risks and impacts of climate change issues on business and growth plans, review impacts of emerging climate legislation and regulations, and review public disclosures on carbon risk
• playing a critical role in supporting Suncor's public policy and government interaction and deepening Indigenous and stakeholder relationships and collaboration
• supporting Suncor's sustainability initiatives
• embedding ESG performance as a component of Suncor's executive compensation (specifically climate performance)
The CSO serves as the bridge between Management and the Board on carbon risk. As such, the CSO has the responsibility of communicating Suncor's carbon risk and mitigation measures to the Board and, conversely, translating the strategic direction from the Board into corporate action. The CSO presents regularly to the EHS&SD Committee, which is a committee of the Board of Directors. The EHS&SD Committee's responsibilities include monitoring the effectiveness and integrity of Suncor's internal controls as they related to operational risks of the Corporation's physical assets and other matters relating to the environment, health, safety and sustainable development. The EHS&SD Committee is also responsible for the review of the policies and practices of the Corporation respecting operational risks, of which climate is listed as a principal risk. Suncor's CSO is currently the executive sponsor of carbon risk, which is mapped to the full board and the EHS&SD Committee. This includes assessing the risks and impacts of climate change issues on the Corporation's current business and growth plans, reviewing the impacts of emerging climate legislation and regulations and reviewing the Company's disclosures on carbon risk.

Position or committee
Chief Executive Officer (CEO)

Climate-related responsibilities of this position
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities
<Not Applicable>

Reporting line
Reports to the board directly

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

Please explain

Position or committee
Chief Financial Officer (CFO)

Climate-related responsibilities of this position
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities
<Not Applicable>

Reporting line
CEO reporting line

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

Please explain

C1.3

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

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	Executive compensation plans are a key component of board oversight and closely tied to our strategy execution and business performance. Starting in 2022, we strengthened the link between the compensation of our executives and Suncor's sustainability performance. We introduced a component of executive compensation that will be directly determined by progress relative to our climate objectives, in the form of performance share units (PSUs) tied to the long-term incentive plan for the vice president level and up. Vesting of the initial award will be based on progress from 2022 through 2024 toward our 2030 commitment to reduce annual GHG emissions by 10 megatonnes (Mt) across our value chain. Climate PSU metrics focus on the health of the GHG portfolio, the allocation of capital and the achievement of emission reductions.

C1.3a

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

Entitled to incentive
Corporate executive team

Type of incentive
Monetary reward

Incentive(s)
Shares

Performance indicator(s)
Achievement of climate transition plan KPI
Progress towards a climate-related target
Achievement of a climate-related target
Implementation of an emissions reduction initiative
Reduction in absolute emissions
Energy efficiency improvement

Incentive plan(s) this incentive is linked to
Long-Term Incentive Plan

Further details of incentive(s)
This incentive plan rewards near term action on a three year cycle, based on investments made and projects advanced in the emissions rduction space.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan
The criteria for this incentive is based on Suncor's 2030 target of 10Mt CO2e of GHG reduction across our value chain by 2030, recognizing that in the early stages, the specific actions to incentivize are on capital allocation and development support for long term projects. The VP level and above are provided with guidance on specific actions over a three year period required to stay on track towards our 2030 target.

C2. Risks and opportunities

C2.1

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

C2.1a

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

	From (years)	To (years)	Comment
Short-term	0	5	Risk time horizons are consistent with Suncor's Risk Management Standard.
Medium-term	5	10	Risk time horizons are consistent with Suncor's Risk Management Standard.
Long-term	10	50	Risk time horizons are consistent with Suncor's Risk Management Standard.

C2.1b

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

Suncor is committed to a proactive program of enterprise risk management intended to enable decision-making through consistent identification and assessment of risks inherent to its assets, activities and operations.

Suncor defines risk as the effect on the achievement of organizational objectives and encompasses both positive opportunities and negative threats to the business. Suncor's risk assessment includes a quantitative and qualitative review of consequence and likelihood of five receptors including health & safety, financial, environmental, reputational, and regulatory impacts on Suncor's business. Suncor uses a six-by-six risk matrix to determine risk level through the combination of Likelihood and Consequence of the risk occurring. The six levels of Likelihood are based on the frequency the risk may occur (e.g. Level 5 likelihood – risk occurs between 1 and 10 years). The six levels of Consequence are specific to each receptor in the assessment (e.g. a Level 3 Health & Safety consequence – one or more injuries requiring medical treatment or a Level 3 Financial consequence of $10 million to $250 million). Likelihood ranges from Level 1 (consequence seen once or twice in the industry) to Level 6 (consequence is expected to occur more than once per year). Financial consequence ranges from Level 1 (less than $100,000) to Level 6 (greater than $1 billion). The most significant risks are those that would have the combination of a high consequence (Level 5 or 6) and potential to occur more frequently (Level 5 of 6). Following the assessment of likelihood and consequence and factoring in mitigation, residual risks are categorized from Level IV (lowest potential significance) to Level 1+ (highest significance) and assigned to the appropriate organization level for management.

Our most significant risks (opportunities and threats) are considered Principal Risks and are outlined in Suncor's 2022 Management Discussion & Analysis (MD&A). These risks could have a material impact on Suncor's ability to meet or support its strategic business objectives, financial condition, reserves and results of operations. Climate risks and opportunities are embedded throughout the organizational structure and processes of both our management and Board of Directors, including strategy development, business planning, project development, risk oversight, scenario analysis, executive compensation, skills development and external engagement. The CEO is accountable for principal risk management. Further, Suncor's Board of Directors ensures there are systems in place to effectively identify, manage, and monitor the principal risks of Suncor's business, and to mitigate their impact.

Suncor considers carbon to be a principal risk. Thus, carbon risk is already integrated into many aspects of our business planning and decision-making processes and requires the full board to review external trends, scenarios and Suncor's risk management plans, at least annually.

C2.2

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

Value chain stage(s) covered
Direct operations

Risk management process
Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment
More than once a year

Time horizon(s) covered
Short-term
Medium-term
Long-term

Description of process
Suncor undertakes a corporate-wide process to identify, assess and report on significant risks including carbon as a principal risk. Carbon risk receives oversight from the full Board and executive management and systems are in place to mitigate potential impacts. Our assessment is supported by a carbon price outlook, which highlights regulations and their expected trajectory, as they apply to our assets, our upstream suppliers and our downstream products. Suncor's Enterprise Risk Management (ERM) process employs a corporate risk matrix to assess and prioritize all risks/opportunities using a measure of likelihood and consequence including reputational, financial and environmental impacts. To prioritize the risks and opportunities, our investments and capital decisions are tested against a range of variables, including alternative future energy scenarios, GHG emissions forecasts, and our carbon price outlook to ensure an expectation of a competitive rate of return over the asset life.

Suncor assesses specific risks to our physical assets at the facility level, including the risk of acute or chronic extreme weather events, which are possible in the areas where we operate. We manage these risks through facility design and operational procedures and maintain insurance for damage to, or loss of, assets. Physical risks associated with climate change may manifest as acute (or event-based) and chronic (or gradual). They may occur over different geographic scales and time horizons, sometimes exceeding normal business planning and investment time frames. Suncor operates in regions of Canada and internationally that have always had extremes in weather and weather-related events, including extremes in temperatures, as well as wildfires and flood risks. Operational plans, business continuity plans, and insurance are all tools used to mitigate these risks.

Value chain stage(s) covered
Downstream

Risk management process
Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment
More than once a year

Time horizon(s) covered
Short-term
Medium-term
Long-term

Description of process
Suncor considers key transition risks, such as new policies and regulations, evolving market forces and changes in consumer preferences, using four future scenarios and the integration of carbon pricing into strategic plans and capital allocation decisions. One activity to support the assessment of transitional risks and opportunities is Suncor's use of four long-term energy futures scenarios. Each scenario is plausible and could affect our operating environment and business strategy in markedly different ways. Signposts and milestones are monitored to identify critical shifts in the external context. Signposts include changes in global energy demand and supply mix, political and economic indicators, climate data and policy trends, as well as technology advances and consumer trends.

C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Existing and future laws and regulations can impose significant liabilities on a failure to comply with their requirements. Concerns over climate change and fossil fuel extraction could lead governments to enact additional or more stringent laws and regulations applicable to Suncor and other companies in the energy industry in general. Each year, a carbon price outlook is developed, accounting for existing regulations and the expected trajectory of those regulations as they apply to our assets. Investments and capital decisions are tested against a range of variables, including our carbon price outlook, to ensure a competitive rate of return over the asset life. Examples of current legislation imposing a cost on carbon include the Alberta Technology Innovation and Emissions Reduction (TIER) Regulation. The cost of this legislation is built into Suncor's economic evaluations.
Emerging regulation	Relevant, always included	Future laws and regulations may impose significant costs to comply with their requirements. Concerns over climate change and fossil fuel extraction could lead governments to enact additional or more stringent laws and regulations applicable to Suncor and other companies in the energy industry in general. Each year, a carbon price outlook is developed, accounting for existing regulations and the expected trajectory of those regulations as they apply to our assets. Investments and capital decisions are tested against a range of variables, including our carbon price outlook, to ensure a competitive rate of return over the asset life. New carbon pricing and clean fuel regulations are being developed in several jurisdictions in which Suncor operates.
Technology	Relevant, always included	Technology is included in the annual risk assessment process of Suncor. Suncor incorporates technology into scenario planning and uses four scenarios encompassing different degrees of technological change. A review of the existing portfolio of GHG reduction technologies is also included in the annual risk assessment process. In 2022, we allocated approximately $540 million, or 11% of total capital and 35% of economic capital, to low-carbon initiatives, much of which was allocated to the Base Plant Cogeneration project.
Legal	Relevant, always included	Suncor undertakes a corporate-wide process to identify, assess and report on significant risks including carbon as a principal risk. Our assessment is supported by a carbon price outlook, which highlights regulations and their expected trajectory, as they apply to our assets. The risk assessment includes a review of financial, reputational, and regulatory impacts on Suncor's business, including the potential implications of climate litigation.
Market	Relevant, always included	As part of its ongoing business planning, Suncor assesses potential future costs associated with GHG emissions in its operations and the evaluation of future projects, based on the company's outlook for the carbon price under current and pending GHG regulations. Suncor evaluates the potential impact of future carbon-constrained scenarios on its business strategy. The annual assessment of carbon risk as a principal risk takes into account demand destruction of fossil fuels due to changing societal trends and alternative energy incentives and mandates.
Reputation	Relevant, always included	Suncor undertakes a corporate-wide process to identify, assess and report on significant risks including carbon as a principal risk. The risk assessment includes a review of financial, reputational, and regulatory impacts on Suncor's business, including increasing public opposition to fossil fuels, and oil sands in particular.
Acute physical	Relevant, always included	Physical risks associated with climate change may manifest as acute (or event-based). They may occur over different geographic scales and time horizons, sometimes exceeding normal business planning and investment time frames. Suncor operates in regions of Canada and internationally that have always had extremes in weather and weather-related events. In general, Suncor's operations are subject to operational hazards and risks such as, among other things, icebergs, hurricanes, fires (including forest fires), severe winter conditions, prolonged periods of extreme cold or extreme heat, flooding, droughts, and other extreme weather conditions. Our consideration of acute risk is focused on the potential range of intensity and frequency of these types of events and potential long-term conditions that may impact our physical infrastructure or the behaviour of the natural environments in which we operate. Many of our facilities routinely operate in an annual temperature range of -40°C to +40°C and are built to mitigate extreme weather events. Operational plans, business continuity plans, and insurance are all tools used to mitigate these risks. Additional information is detailed in Suncor's annual Climate Report.
Chronic physical	Relevant, sometimes included	Physical risks associated with climate change may manifest as chronic (or gradual). They may occur over different geographic scales and time horizons, sometimes exceeding normal business planning and investment time frames. Chronic risks associated with climate change are evident in conditions such as coastal erosion from sea level change, shifting ranges of plant and animal species and long-term changes in the water flow of glacier-fed streams. Suncor's initial assessment of chronic risks shows that, over the long term, there may be some effects on our operations in terms of the base flow of water bodies that feed into our operations or geographic shifts in biomes and habitats that may affect the way in which we reclaim our operations, which require further risk assessment and analysis. Additional information is detailed in Suncor's annual Climate Report.

C2.3

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

Yes

C2.3a

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

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation	Carbon pricing mechanisms

Primary potential financial impact

Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Suncor's operations in British Columbia are subject to a carbon tax which is set at $50/tCO2e for 2022

Suncor's Alberta operations are subject to the Technology Innovation and Emissions Reduction Regulation (TIER) in 2022 which imposes a carbon price of $50/tCO2e on emissions beyond ambitious government-set performance targets for each facility. Facilities that perform better than the target can generate and sell credits within this system. Where physical GHG reductions cannot be made at the facility, compliance may be achieved through a combination of offsets, emission performance credits or payment into a provincial technology innovation fund. Alberta oil sands facilities are also subject to a combined Emissions Limit of 100 Mt, which is driving increased investment in and deployment of new technology to collectively remain under the cap.

Suncor's Ontario facilities (including the Sarnia refinery and St. Clair ethanol plant) are subject to the federal Greenhouse Gas Pollution Pricing Act (GGPPA). The GGPPA includes an economy-wide consumer carbon levy on use of fossil fuels and an Output Based Pricing System applied to industrial sectors that face international competition. The 2022 carbon price under the GGPPA is $50/tCO2e.

In 2022, Suncor's refinery in Quebec is regulated under a cap-and-trade program linked to the Western Climate Initiative (WCI) cap and trade program. Regulated refining facilities receive an allowance allocation that aligns with a benchmark performance and considers competitiveness in a trade-exposed context. Fuel suppliers are required to purchase allowances to cover the tail pipe emissions of all fuel sold, the cost of which is largely passed through to the consumer, thus acting as a carbon price on fuel consumption.

In Newfoundland and Labrador, the provincial carbon pricing program includes performance standards for large industrial facilities. Performance standards for large industrial facilities are legislated under the Management of Greenhouse Gas Act and associated regulations, which apply to all facilities that emit 15,000 tCO2e or more per annum. This includes Suncor's operated Terra Nova offshore operation. Consistent with the Canadian federal carbon pricing scheme, the 2022 Newfoundland and Labrador carbon price is $50/tCO2e.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
Medium-low

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
211000000

Potential financial impact figure – maximum (currency)
1107000000

Explanation of financial impact figure
Based on the outlook for new emissions regulations, we have updated our cost estimates. The estimated 10-year average, before-tax cost of carbon is $0.65 per barrel for our upstream net production and $0.42 per barrel for our downstream saleable yield. These financial figures are based on the 10 year estimated cost per barrel multiplied by 2022 production volume.

Cost of response to risk

Description of response and explanation of cost calculation
Suncor's GHG target of 10 Mt of GHG reductions in the energy system by 2030 drives energy efficiency, fuel switching opportunities, and technology advancement. Suncor's technology strategy is driving step-change innovation to reduce GHG intensity in bitumen production and processing. COSIA's GHG technology strategy is to accelerate deployment of step-change technology. We continue to generate offset credits from our wind and cogeneration assets to reduce GHG compliance costs at other facilities. Where efficiency improvements and Emission Performance Credits from our other operations do not cover compliance requirements, Suncor purchases compliance instruments at competitive prices.

Comment
Risk Name: Escalating Climate-Related Regulatory Costs and Constraints

---

Identifier
Risk 2

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Reputation	Increased stakeholder concern or negative stakeholder feedback

Primary potential financial impact
Decreased revenues due to reduced production capacity

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Changes in public perception of integrated oil and gas companies and their operations may pose issues related to development and operating approvals or market access risk for products, which may have a material adverse effect on Suncor's business, financial condition, results of operations and cash flow. Based on data presented by Environment and Climate Change Canada, notwithstanding that Canada's oil sands proportionate share of global emissions is less than 0.2%, the development of the oil sands has figured prominently in politics, media and activist commentary on the subject of climate change. According to an IHS study, while emissions intensity has decreased over the past decade for oil sands production, oil sands refined products range between 1% - 19% higher carbon intensity on a well-to-wheels basis than products from conventional crudes. Planned growth projects to meet global energy demand may increase Suncor's absolute emissions in the next decade. Reputational damage related to GHG emissions may directly or indirectly affect the profitability of our current oil sands projects and the viability of future oil sands projects in a number of ways, including: a) creating regulatory uncertainty that challenges economic modelling of future projects and potentially delays sanctioning; b) motivating more onerous emissions regulation of those projects that could result in changes to facility design and operating requirements, thereby potentially increasing the cost of construction and operation; and c) legislation or policy that limits the purchase of oil sands crude oil by governments and other institutional consumers that, in turn, limits the market for this crude oil and reduces its price.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
0

Potential financial impact figure – maximum (currency)
863900000

Explanation of financial impact figure
A potential cost to the oil sands industry associated with climate change reputation risk is the price differential between bitumen & lighter oils caused by delays in approval of new pipelines intended to provide access of oil sands bitumen to tidewater and international markets.
The 2022 average differential between WCS and WTI grades of crude oil were $12.78US. The 2022 production volume of non-upgraded bitumen was 185.2 kbbl/day.

Cost of response to risk

Description of response and explanation of cost calculation
Market access risk is substantially mitigated by Suncor's integrated business model where we process much of our bitumen in our own upgraders & refineries thereby avoiding the bitumen discount. Reputational risk is best managed through improved environmental performance. Our oil sands operation's energy efficiency initiatives have demonstrated tangible reduction in energy intensity since 1990. We continue to make long term tech investments towards step changes in in-situ production emissions intensity. Activities include various efforts to collaborate in industry initiatives (e.g. COSIA); our support of various academic & engineering research organizations to understand the lifecycle emissions of oil sands products; and consistent engagement with media/public to deliver factual and balanced information in a relevant and understandable format. These actions allow us to create a space for balanced dialogue. Studies have demonstrated that oil sands refined products, on a well-to-wheels basis, are on average 1% - 19% higher carbon intensity than average conventional crude-based refined products. Hence, oils sands refined products are on par with the refined products made from many international heavy crude oils including Venezuela and California.

Comment
Risk Name: Increased Stakeholder Expectations

Identifier
Risk 3

Where in the value chain does the risk driver occur?
Downstream

Risk type & Primary climate-related risk driver

Market	Changing customer behavior

Primary potential financial impact
Decreased revenues due to reduced demand for products and services

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Suncor produces refined products, marketed through our Petro-Canada retail network. Potential for consumer behaviour changes, as a result of increasing availability of non-fossil fuel alternatives such as electric vehicles, could reduce the demand for Suncor's fossil fuel based refined products.

We believe hybrid, plug-in hybrid, and electric vehicles will remain cost-effective additions to the passenger vehicle fleet and will, along with fuel efficiency standards, contribute to moderating growth in global gasoline demand. We also believe safety, low-cost, consumer convenience and improvements in carbon intensity mean liquid fuels will remain the primary fuel source in vehicle mobility for many years to come.

Mitigating the impact on the market from these changes in demand, we expect that older, inefficient refining capacity will be taken out of commission in the future, somewhat balancing North American supply and demand. Retention of market share in refined product sales will become critical, likely resulting in tight retail margins in North America. However, both refined products and crude oils are easily transported into global markets.

Time horizon
Medium-term

Likelihood
More likely than not

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
0

Potential financial impact figure – maximum (currency)
1898000000

Explanation of financial impact figure
In 2022, our refining and marketing business contributed net earnings of $5.964 billion, making it a significant contributor to the company's profitability. Some of this margin would be at risk if demand for refined product decreases (33.3% decrease in revenues are assumed for this risk).

Cost of response to risk

Description of response and explanation of cost calculation
Suncor does not incur direct costs associated with increasing market access for our products. Costs associated with supporting marketing and monitoring transportation fuel developments and demand are integral to our business and not material.

Suncor has a diversified portfolio which includes a renewable liquid fuels business. Suncor supports initiatives to gain access to new international markets in the next 5-10 yrs for our crude oil and refined products. We monitor alternative transportation technology and are well-positioned to invest in the provision of low-carbon transportation fuels once reliability, value and environmental attributes support consumer preference shift. Suncor has supported the development of pipeline infrastructure that would improve market access & operations flexibility for our oil sands bitumen.

Suncor has also completed a coast-to-coast Canadian EV charging network at more than 57 Petro-Canada stations to provide a retail offering to electric vehicle owners.

Cost of Management ($0) Note: Suncor does not incur direct costs associated with increasing market access for our products. Costs associated with supporting marketing and monitoring transportation fuel developments and demand are integral to our business and not material.

Comment
Risk Name: Increased Stakeholder Expectations

Identifier
Risk 4

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Acute physical	Other, please specify (Extreme weather events - wind storms, temperature extremes, icebergs, and wildfires)

Primary potential financial impact
Decreased revenues due to reduced production capacity

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Suncor operates in regions of Canada and internationally that have always had extremes in weather and weather-related events, including extremes in temperatures, as well as wildfires and flood risks. Suncor's oil sands facilities sometimes operate in harsh weather environments, subject to expected periods of extreme cold in the winter, heat waves in the summer, and increased wildfire risk. The risk to Suncor is that prolonged periods of extreme cold could force these facilities to reduce capacity for periods of time to ensure worker safety and prevent undue stress on equipment. Prolonged periods of extreme heat may lead to production cuts if adequate supply of cooling water is not available. Suncor's refineries at Montreal and Sarnia have access to extremely large bodies of cooling water, so are far less exposed. In some instances, extreme weather events may cause interruptions in production. This risk exists now and into the very long term > 50 yrs.

Time horizon
Long-term

Likelihood
Unlikely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
570600000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Prolonged periods of extreme weather have the potential of disrupting production, costing millions of dollars in lost revenue. The likelihood of extreme weather events remains unknown, but through our risk management processes, we expect the magnitude of impact to remain low-medium for the foreseeable future, even if increases in extreme temperature or weather variations occur. The estimated financial impact is based on extreme weather causing a shut down of Base Plant operations. Based on the average 2022 daily production and the 2022 average cost of oil (both from our 2022 Annual Report), the estimated daily impact on revenue is $57.06 Million per day. For the purpose of this risk assessment, we have assumed a 10-day shutdown.

Cost of response to risk

Description of response and explanation of cost calculation
Over the last decade, Suncor experienced unexpected costs in response to the 2013 floods in Calgary, Alberta and the 2016 wildfires in Alberta's Fort McMurray region, including lost revenue from business interruption. These risks and outcomes were incorporated into Suncor's ERM system to inform future business planning. Given the location of Suncor's assets and the range of conditions for which they were designed, Suncor does not expect to incur chronic financial costs due to climate change beyond those already incorporated into the design of resilient infrastructure. Our business planning process includes the potential impacts of a broad range of climate conditions and effects on our facilities. Examples of plans being considered include water storage and modified water management in the Wood Buffalo region to mitigate extended periods of drought.

There are no additional costs for action to protect against temperature extremes. The cost of management of the operations' physical risk mitigation is in place for the life of the asset. As these programs are applicable to multiple risks it is difficult to apportion a specific cost to managing climate-specific physical risk. The cost of wildfire management is shared with the province and other operators in the area. Many of Suncor's facilities routinely operate in an annual temp range of -40 to +40 degrees C and facilities are built to withstand extreme weather events. However, in the event of more frequent or prolonged temp extremes, additional capital expenditure may be required to install more robust equipment, warming sheds, or water cooling processes. Physical risks are primarily managed by the operations at a business-unit and facility level. We also maintain insurance, as appropriate, for damage to, or loss of, assets as well as production interruption, with the exception of insurance coverage for Named

Windstorms.

The estimated cost of response is based on the cost of earthworks and vegetation management in the event of a nearby wildfire, in order to prevent impacts on Suncor's facilities in the Athabasca region.

Comment
Type of Financial Impact: Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants)

Potential Financial Impact ($0/day to $57.06 M/day) Note: This is a range of daily cost based on the loss of production due to Base Plant completely shutting down their production.

Cost of Management ($1,000,000) Note: There are no additional costs for action to protect against temperature extremes. The cost of management of the operations' physical risk mitigation is in place for the life of the asset. As these programs are applicable to multiple risks it is difficult to apportion a specific cost to managing climate-specific physical risk. The cost of management is based on earthworks and vegetation management in response to a nearby wildfire in the Athabasca region.

C2.4

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

C2.4a

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

Identifier
Opp1

Where in the value chain does the opportunity occur?
Downstream

Opportunity type
Products and services

Primary climate-related opportunity driver
Development and/or expansion of low emission goods and services

Primary potential financial impact
Increased revenues resulting from increased demand for products and services

Company-specific description
Suncor complies with all Renewable Fuel Standards (RFS) in the jurisdictions within which we operate and markets fuel products. Regulatory requirements for renewable fuel such as the RFS present potential revenue opportunities for Suncor in biofuels. Governments across North America are mandating the use of ethanol in transportation fuels. Canadian regulations require an average 5% renewable fuel content in gasoline; proposed Canadian regulations also require an average annual 2% renewable content in diesel fuel. Some provincial regulations require a higher percentage blending, and others have introduced other systems such as a Low Carbon Fuel Standard or a Cap and Trade system. Over the past decade, we've made strategic investments in promising advanced-generation biofuel technologies that create ethanol and methanol from waste streams such as non-recyclable municipal waste, industrial forestry and agricultural waste biomass. We have invested in leading biofuels companies and continue to progress a handful of key projects, designed to be readily scalable and replicable to take advantage of emerging growth opportunities, subject to attractive economics. These investments are critical to developing cost-effective ways to meet future blending requirements while keeping Suncor at the forefront of technology and helping to meet our GHG objectives. Suncor owns and operates the largest ethanol plant in Canada, and virtually all of the output is blended into gasoline and marketed under the Petro-Canada brand. In addition, we are continuing to make modest, but targeted, investments in developing commercial-ready renewable fuel technologies that provide an early mover advantage and support future expansion (e.g., Enerkem, LanzaTech, LanzaJet and advanced generation waste-based feedstocks)

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
538000000

Potential financial impact figure – maximum (currency)
759000000

Explanation of financial impact figure
In 2022, Suncor biofuel operations produced 358.03 million litres of ethanol. Throughout 2022, the spot price for ethanol ranged from CAD$1.57 to CAD$2.21 per litre . The resulting revenue opportunity ranged from $538 million to $759 million CAD in 2022.

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation
Suncor expects that RFS will be amended to increase the required level of biofuel, creating a stable and increasing market for biofuels. Suncor manages this opportunity by continuously evaluating business and technology opportunities to expand into next generation biofuels markets to take advantage of renewable fuel standards and reduced

carbon intensity. This could help to increase the magnitude of biofuels production/blending over the medium-long term (5-10 yr timeframe). Suncor has been blending ethanol in our retail fuels since 1992; Suncor's St. Clair Ethanol plant expanded capacity to 400 million litres per year in an effort to meet this growing North American demand.

Comment
Name of Opportunity: Increasing Biofuels Demand

Cost to Realize Opportunity Note: Suncor's biofuels business is a profit generating business. There is no net management cost.

Identifier
Opp2

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Products and services

Primary climate-related opportunity driver
Development and/or expansion of low emission goods and services

Primary potential financial impact
Increased revenues resulting from increased demand for products and services

Company-specific description
Suncor supports the use of offsets or credits as compliance mechanisms under existing and proposed climate change regulations. Suncor has actively engaged in the development of offset protocols where it sees opportunities to either purchase quality offsets in the market, or create offsets in our own operations. Suncor uses natural gas cogeneration (80% efficient) to provide combined steam and power to their own facilities and exporting surplus power to the grid to displace more carbon-intensive coal-fired generation or natural gas combined cycle generation (40% efficient). Suncor operates 1.1 GW of cogeneration with surplus capacity sold to the power grid. Where surplus power is exported to the grid, Suncor is able to reduce our obligation under TIER on the difference between a grid intensity level reflecting the efficiency of the cogeneration unit and a regulated performance standard. This presents an opportunity for Suncor through reduction of compliance costs because these credits may be used as compliance instruments under Alberta's TIER regulation. Additionally, due to the must-run nature of our operations, the cogenerated power sold to the grid is highly reliable compared to other forms of generation, reducing the overall pool price for power benefiting Alberta residents. Over the past few years, Suncor has developed its internal carbon marketing capability which has helped to reduce our overall compliance cost. Suncor has an opportunity with cap and trade schemes to stimulate research and innovation in energy efficiency; earn revenue from investments made to reduce our own emissions; improve the economics of the reduction project; and develop internal capability to understand the carbon trading markets.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
Low

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
24400000

Potential financial impact figure – maximum (currency)
44810000

Explanation of financial impact figure
Suncor's facilities occasionally generate carbon credits. The bulk of these credits are generated and used in the Alberta carbon market for Suncor's oil sands and in situ operations.

With ongoing policy changes, the range of the financial impact represents our experience with emission performance credits (EPCs).

Cost to realize opportunity
400000

Strategy to realize opportunity and explanation of cost calculation
Suncor manages this opportunity through measurement, reporting, and receipt of emission performance credits, as well as a regular review of its operations for the potential to generate additional offset credits. The deployment of cogeneration technology in Suncor's in-situ facilities continues to have a significant positive impact such that Suncor can directly control its production, maintain energy reliability, earn emission performance credits through the sale of competitively priced surplus power and reduce the carbon intensity of the provincial electricity grid. The power sales opportunity has led to the establishment of a real time power trading desk to capture full value of the power sold to the electricity grid.

Comment
Name of Opportunity: Carbon Credit Offset Generation

Cost to Realize Opportunity Note: Internal capability is provided by corporate and facility based personnel with multiple duties. Total workload is approximately 2 FTE.

Identifier
Opp3

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Use of more efficient production and distribution processes

Primary potential financial impact
Reduced direct costs

Company-specific description
There is a natural incentive to reduce energy use. The acceleration of technological innovation to substantially change production processes and reduce GHG emissions in our operations is expected to lower energy use and, therefore, lower energy costs. The same technology that reduces energy consumption could also allow for easier and more cost effective extraction of complex unconventional resources.

Time horizon
Medium-term

Likelihood
More likely than not

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
117760000

Potential financial impact figure – maximum (currency)
254700000

Explanation of financial impact figure
Energy costs are the single largest input cost in our business. We estimate that a fuel efficiency improvement of 10% to 20% will reduce natural gas costs in Suncor's production of bitumen (mining and in situ) by $118M to $255M per year. Technology improvements have the possibility of reducing other costs, as well, such as GHG compliance costs, water treatment costs, etc.

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation
One method Suncor utilizes for managing technological advancements is by being a strong advocate for carbon policy that promotes accelerated technology development.
- Suncor is a founding member of COSIA, a 9-member organization seeking to develop and share intellectual property on environmental technology in the oil sands. Through collaboration centered around a common interest like environment and technology stewardship, Suncor and partners are able to pool resources with the goal of making significant advancement over acting alone. As a result, we expect to see advancements benefiting the environment over the next 2-10 yrs.
- Suncor is an active member of the CRIN (Clean Resource Innovation Network), which aims to position Canada as a global leader in producing clean hydrocarbon energy from source to end use. The network brings together the oil and gas industry, innovators, investors, start-ups, policy-makers, incubators and accelerators, researchers and students. It facilitates the connections to advance technologies for use in Canada and with the potential for export to global markets emphasizing the potential impact that our country can make to help address global challenges.

Comment
Name of Opportunity: Low-Carbon Technology with Adjacent Industries and development of new technologies

Cost to Realize Opportunity Note: In 2022, we allocated approximately $540 million, or 11% of total capital and 35% of economic capital, to low-carbon initiatives, much of which was allocated to the Base Plant Cogeneration project.

Identifier
Opp4

Where in the value chain does the opportunity occur?
Downstream

Opportunity type
Products and services

Primary climate-related opportunity driver
Development and/or expansion of low emission goods and services

Primary potential financial impact
Increased revenues through access to new and emerging markets

Company-specific description
With increasing consumer uptake of EVs, there is an opportunity to offer customers EV supercharging and increase traffic in Petro-Canada's convenience stores. Suncor has the first cross-Canada network of more than 57 fast-charging electric vehicle (EV) chargers at Petro-Canada™ stations. These stations are positioned no further than 250 kilometres apart, ensuring an EV charging station is within range on this electric highway and eliminating one of the significant barriers to EV adoption.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
Low

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
317839.83

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
In 2022, Suncor completed 57 EV fast charging stations at existing Petro-Canada stations along the TransCanada Highway, from coast-to-coast. Charging fees are determined by the minute. Suncor's revenue from the EV fast charging stations was $317,839.83 in 2022. The potential financial impact is yet to be fully realized.

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation
In 2022, the 57 EV fast charging stations provided customers with approximately 1,080,000 KWh which is equivalent to avoiding ~766 tCO2e from entering the atmosphere. We are increasing our low-carbon electricity capacity and expanding Canada's Electric Highway™. As an integrated energy company, Suncor can influence the GHG profile of its entire value chain. In our wholesale and retail distribution business we provide customers with a variety of fuel and service offerings, including renewable fuel and low-carbon power. Consumer options are increasing, from traditional internal combustion engine vehicles to hybrid vehicles, battery electric vehicles and hydrogen fuel cell vehicles. As transportation options and infrastructure evolve, we will expand low-carbon offerings through our wholesale business, Petro-Canada™ retail brand and established relationships with millions of PetroPoints™ customers.

Comment

C3. Business Strategy

C3.1

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

Row 1

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

Publicly available climate transition plan
<Not Applicable>

Mechanism by which feedback is collected from shareholders on your climate transition plan
<Not Applicable>

Description of feedback mechanism
<Not Applicable>

Frequency of feedback collection
<Not Applicable>

Attach any relevant documents which detail your climate transition plan (optional)
<Not Applicable>

Explain why your organization does not have a climate transition plan that aligns with a 1.5°C world and any plans to develop one in the future
As science has progressed, the Paris Agreement, which sets out a global framework to avoid dangerous levels of climate change, has set a goal to "limit global warming to well below 2°C, preferably to 1.5 °C, compared to pre-industrial levels". Suncor supports the Paris Agreement and we are reviewing 1.5°C scenarios to further test the resilience of our business strategy.

Explain why climate-related risks and opportunities have not influenced your strategy
<Not Applicable>

C3.2

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

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative and quantitative	<Not Applicable>	<Not Applicable>

C3.2a

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

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios: Bespoke transition scenario	Company-wide	1.6ºC – 2ºC	2DC: •Peak emissions are reached following a combination of cost and generational pressures, technological innovation and political unity that bring enough of the world together to take dramatic and unified action to change the trajectory of GHG emissions. •Aggressive emission reductions occur in all sectors and solutions to remove GHGs from the atmosphere are implemented to reduce the total concentration of CO2. •An international alliance with a shared 2°C ambition, along with transparent collaboration in technology, trade and environmental approaches, is established. •A broad-based price on carbon throughout the economy reduces consumption and incent the adoption and improvement of low-carbon technology. •In conjunction with carbon pricing, governments implement market-based solutions within the alliance, including open carbon markets to buy, sell and trade offsets across a vast economy. Energy markets impact: •Oil plays a continued, albeit diminished, role to 2100, while renewables and nuclear power become more prominent post-2050. •In the power sector, the demand for coal faces sustained pressure globally because of its relatively high emissions intensity. Renewables continue to gain market share on improved cost profiles, dedicated policy support and the firm capacity offered by improved storage in the form of hydro, batteries and hydrogen. Nuclear power market penetration increases, given lower costs and new, safer technologies and policies. •In the transportation sector, the world shifts away from oil. Oil demand in the second half of the century transitions to demand for petrochemical feedstock. The decline is most pronounced in the light-duty vehicle segment where electrification, biofuel and hydrogen supply opportunities grow. The decline is slower in the heavy goods vehicle segment and hydrogen as a transportation fuel grows as costs decrease. Expected impact on Suncor: •Some producing upstream assets may be retired before the end of their producing life. •We grow our business in renewable fuels, low-carbon power and hydrogen. •We sustain and optimize our existing hydrocarbon business, reducing its carbon footprint. •We play an enhanced role in decarbonization through scaling and commercialization, with strong partnerships and collaboration.
Transition scenarios: Bespoke transition scenario	Company-wide	Unknown	Autonomy*: •Pressure from stakeholders continues to push companies and governments toward faster action on ESG measures. •Greater international co-operation ensures sufficient progress on climate change. •Free and open markets in a technology-driven economy are strongly intertwined with climate change action. •The massive changes to the global energy system to transition to a low-carbon world come at enormous cost, where people, companies, infrastructure and whole industries are made redundant, with significant investments required to replace the old and grow the new. Energy markets impact: •Oil is still required for decades to come, but its share of energy demand declines over time as economic growth becomes less oil-intensive. •Natural gas demand remains steady, overtaking oil as the largest source of global non-renewable energy by the end of the scenario period. •Renewable power generation becomes the largest source of energy by the end of the period to meet growing electricity demand. •Biofuels and biomass demand nearly doubles, replacing a share of decreasing fossil fuel use. •Production of low-carbon hydrogen grows as technologies for its use also improve. Expected impact on Suncor: •Some producing upstream assets may be retired before the end of their producing life. •Base business is sustained and optimized, providing stable cash flow to support shareholder returns and fund growth of expanded low-carbon energy businesses (renewable fuels, electricity and hydrogen). •Only top-tier refineries globally remain profitable – Suncor's downstream maintains a focus on reliable, efficient, low-carbon and low-cost operations. •Collaboration to reduce emissions accelerates (e.g., Pathways Alliance). *The Suncor scenarios (Autonomy, Rivalry, and Discord) have been independently developed and named by Suncor. Data within the Suncor scenarios references the Green Rules, Inflections and Discord scenarios published by IHS Markit (now part of S&P Global Commodity Insights) in July 2021. Suncor's scenario names are independent of and should not be confused with any current or vintage IHS Markit Energy and Climate Scenarios with these same names.
Transition scenarios: Bespoke transition scenario	Company-wide	Unknown	Rivalry*: •A mix of social, market and government forces drives fundamental changes in energy use and emissions pathways, but realization of climate goals remains limited. •Politics and fiscal challenges constrain governments and inhibit co-operation. •The marketplace often outpaces the government in driving change and investment. •Energy transition accelerates but moves in different ways and at different speeds around the world. •Citizens' conceptual aspirations to address climate change increase but support is fickle, with limited willingness to bear the full financial and social costs associated with realizing governments' climate change ambitions. Energy markets impact: •Energy mix evolves gradually and steadily – fossil fuels still dominate by 2050, but oil and coal lose ground to cleaner-burning natural gas and renewables. •Oil demand stays largely flat during the scenario period. •Natural gas demand growth is supported by abundant supply and policies favouring its lower carbon intensity over oil and coal. •Renewables expand globally, enabled by coal-constraining policies in favour of cleaner power generation options. •Hydrogen demand increases steadily. Expected impact on Suncor: •Existing upstream assets are retired at their normal end of producing life. •Higher prices and stricter emissions policies incentivize new technologies to lower our cost and carbon footprint. •Competitive downstream provides robust returns and more aggressive investment in low-carbon fuels and electricity. •Collaboration to reduce emissions continues, albeit at a more measured pace than in the Autonomy scenario. *The Suncor scenarios (Autonomy, Rivalry, and Discord) have been independently developed and named by Suncor. Data within the Suncor scenarios references the Green Rules, Inflections and Discord scenarios published by IHS Markit (now part of S&P Global Commodity Insights) in July 2021. Suncor's scenario names are independent of and should not be confused with any current or vintage IHS Markit Energy and Climate Scenarios with these same names.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios: Bespoke transition scenario	Company-wide	Unknown	Discord*: •Environmental progress and climate change mitigation weakens in the face of constant economic concerns and political and market instability. •Chronic economic crises make governments short-term focused, insular and confrontational in international affairs •The global supply chain breaks down, raising the cost of living for the emerging middle class. •Decarbonization efforts continue in some key sectors and countries, but the scale and pace are insufficient to significantly alter global emissions growth. •Global GDP growth falters with the weight of debt burdens, lack of financing availability and the inability of governments to generate growth. Energy markets impact: •Change in the global energy mix slows; conventional fuels and technologies retain market leadership. •Slower economic growth limits growth in energy, oil and refined product demand. •Natural gas demand growth slows due to a constrained global economy and ongoing competition from lower-cost coal and falling-cost renewables. •Despite continued competitiveness, renewables see less growth compared to Autonomy and Rivalry scenarios. Expected impact on Suncor: •Existing upstream assets may be extended beyond their normal end of producing life. •High-return energy investments continue to be funded. •Suncor downstream well positioned to compete, with a focus on reliable, efficient and low-cost operations. Compared to Rivalry, there is less competition expected in both our traditional refined product businesses and low-carbon fuels and electricity businesses. *The Suncor scenarios (Autonomy, Rivalry, and Discord) have been independently developed and named by Suncor. Data within the Suncor scenarios references the Green Rules, Inflections and Discord scenarios published by IHS Markit (now part of S&P Global Commodity Insights) in July 2021. Suncor's scenario names are independent of and should not be confused with any current or vintage IHS Markit Energy and Climate Scenarios with these same names.

C3.2b

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

Row 1

Focal questions

What is the plausible level of climate policy and action achieved under each scenario we consider?

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

2DC:
•Peak emissions are reached following a combination of cost and generational pressures, technological innovation and political unity that bring enough of the world together to take dramatic and unified action to change the trajectory of GHG emissions.
•Aggressive emission reductions occur in all sectors and solutions to remove GHGs from the atmosphere are implemented to reduce the total concentration of CO_2.
•An international alliance with a shared 2°C ambition, along with transparent collaboration in technology, trade and environmental approaches, is established.
•A broad-based price on carbon throughout the economy reduces consumption and incents the adoption and improvement of low-carbon technology.
•In conjunction with carbon pricing, governments implement market-based solutions within the alliance, including open carbon markets to buy, sell and trade offsets across a vast economy.

Autonomy:
•Pressure from stakeholders continues to push companies and governments toward faster action on ESG measures.
•Greater international co-operation ensures sufficient progress on climate change.
•Free and open markets in a technology-driven economy are strongly intertwined with climate change action.
•The massive changes to the global energy system to transition to a low-carbon world come at enormous cost, where people, companies, infrastructure and whole industries are made redundant, with significant investments required to replace the old and grow the new.

Rivalry:
•A mix of social, market and government forces drives fundamental changes in energy use and emissions pathways, but realization of climate goals remains limited.
•Energy transition accelerates but moves in different ways and at different speeds around the world.
•Citizens' conceptual aspirations to address climate change increase but support is fickle, with limited willingness to bear the full financial and social costs associated with realizing governments' climate change ambitions.

Discord:
•Environmental progress and climate change mitigation weakens in the face of constant economic concerns and political and market instability.
•Decarbonization efforts continue in some key sectors and countries, but the scale and pace are insufficient to significantly alter global emissions growth.

These scenarios are substantially based on the IHS Markit Green Rules, Inflections and Discord 2021 scenarios. The scenario descriptions have been modified by Suncor for applicability to its business.

C3.3

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

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	In alignment with our Purpose to provide trusted energy that enhances people's lives while caring for each other and the earth, and informed by our scenario analysis, we have updated our strategy to focus on increasing shareholder returns and accelerating progress in reducing GHG emissions with an objective to be net-zero by 2050. Our strategy: To be Canada's leading energy company by growing our business in low greenhouse gas (GHG) fuels, electricity, and hydrogen while sustaining and optimizing our existing hydrocarbon business and transforming our GHG footprint; all enabled by our expertise, long-life resources, integrated business model, strong connection to customers, and world-class environment, social and governance (ESG) performance. As part of our six strategic objectives, we will be working to grow low GHG emissions businesses that will materially contribute to earnings and cash flow (via expansion of the businesses we are in today, renewable fuels, electricity and hydrogen) and to grow our customer connection through new low carbon products and services. Other examples include: -continuing to make modest, but targeted, investments in developing commercial-ready renewable fuel technologies that provide an early mover advantage and support future expansion (e.g., Enerkem, LanzaTech, LanzaJet and advanced generation waste-based feedstocks) -allocating a significant portion of this capital toward advanced technologies that provide strong, double-digit returns (e.g., Base Plant Cogeneration) -becoming a producer of new forms of hydrogen before 2030 -increasing our low-carbon electricity capacity and expanding Canada's Electric Highway™ (e.g. first cross-Canada network of more than 57 fast-charging electric vehicle (EV) chargers at Petro-Canada™ stations).
Supply chain and/or value chain	Yes	We have undertaken a process to identify risks and opportunities within our supply chain and screen suppliers based on standardized sustainability criteria. This involves reviewing critical suppliers' sustainability reports, codes of conduct and climate disclosures, and integrating climate-related criteria into vendor audits. We also track supply chain risks in our Enterprise Risk Management program to identify climate-related risks and opportunities. Through proactive engagement from business and supply chain sponsors, we expect to advance specific environmental objectives with our core suppliers in the coming years We continue to partner with suppliers who share our values and align with our strategic objectives: seeking opportunities to reduce environmental impacts, supporting the communities where we work and live, and collectively contributing to economic growth. We engage with our suppliers on their sustainability performance by: • assessing sustainability performance as part of prequalification, awarding of work and ongoing supplier performance • gathering data to understand the effects of our supply chain, which helps us make more informed decisions • evaluating sustainability risks and opportunities in our supply chain • building relationships with like-minded suppliers to accelerate innovation and sustainability performance.
Investment in R&D	Yes	Technology and innovation are critical to achieving our goals and executing on our strategy and strategic objectives. From 2021 to 2025, we expect to spend approximately 10% of our annual capital budget, on average, on projects aimed at lowering our emissions and advancing low-carbon energy offerings, of which a significant portion would be allocated to projects that provide strong, double-digit returns. In 2022 we allocated approximately $540 million, or 11% of total capital and 35% of economic capital, to low-carbon initiatives, much of which was allocated to the Base Plant Cogeneration project. We are allocating additional funds and resources to a portfolio of early-stage decarbonization initiatives, primarily in the design and development stage, to advance base business optimization and low-carbon business expansion. Going forward, our technology investments will largely be focused on: - Optimize our base business while reducing cost and carbon emissions - develop next generation processes with GHG reductions through energy efficiency improvements, fuel switching, solvents, non-aqueous extraction, upgrading innovations and transformational technologies for power, steam, hydrogen and carbon capture use and storage - Expand low GHG emissions businesses - advance low GHG fuels, electricity and hydrogen through strategic investments - Harness the digital transformation - use artificial intelligence, machine learning, advanced analytics and remote sensing technologies to improve safety, reliability and sustainability - Partner on strategic investments and collaborations - work together within our industry, invest in global clean-tech venture capital funds and technology companies, including LanzaTech, LanzaJet Inc., Enerkem Inc. and Evok Innovations
Operations	Yes	Suncor incorporates assumptions about existing and proposed new regulations into its corporate scenarios and business plans to evaluate financial risks and opportunities. These assumptions inform development, acquisition and divestment activities and capital and strategic planning decisions. Each year as part of our business planning process we use scenarios to develop multiple price assumptions for a variety of economic variables, including carbon price. All of Suncor's upstream emissions and approximately 80% of our refinery emissions are subject to carbon pricing, which sends a strong signal to manage emissions across our business. We apply carbon prices to our scope 1 and 2 GHG emissions on a working-interest basis for our upstream and downstream business and develop an estimated cost per barrel to illustrate the relative impact of carbon policies. The estimated 10-year (2023-2032), before-tax, average cost of carbon is $1.70 per barrel for our upstream net production and $0.48 per barrel for our downstream salable yield. In 2022 we retired approximately 0.7 Mt of GHG emission credits, reducing our equity emissions from 28.8 Mt to 28.1 Mt. These credits were generated from our operations that performed better than regulatory benchmarks, such as cogeneration and wind, and were supplemented with credits purchased from applicable exchanges. The credits represent real, verified emission reductions to the environment that, once retired, lock in these benefits. Over time, our emissions will be reduced directly and through the generation of credits that can offset our emissions and also be retired for compliance purposes. These benefits may be used for compliance purposes to reduce costs and may be banked for future years. Regulations are designed to reward low-carbon investments and allow us to manage compliance costs in a globally competitive market. This is a consistent approach in all global carbon-pricing regimes and prevents trade-exposed industries such as oil and gas from relocating to jurisdictions without carbon pricing.

C3.4

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

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Indirect costs Capital expenditures Capital allocation Acquisitions and divestments Access to capital	Suncor's carbon price outlook (to assess all investments/projects) is informed by the expected pricing by the federal Canadian government. The carbon price range is from $65/tonne in 2023 to $170/tonne by 2030. Stress testing is done as appropriate. While carbon pricing has increased operating costs, the current regulations have not materially impacted Suncor's revenues. Materiality of impact on revenue may increase with tightening regulations. The greatest impact on revenue will arise from oil price and oil demand. Carbon pricing or cap and trade regulations apply in most of the jurisdictions in which Suncor operates assets. These prices have increased operating costs (although at some facilities, carbon credit generation has offset the cost of compliance). Financial risks associated with increasing carbon prices are affecting investment decisions within Suncor. The portfolio of growth options is being prioritized to take into account the carbon-intensity of the proposed operation and of the energy product. Demand for oil products, commodity prices, and opportunities to reduce operating costs of some existing operations are currently the greatest drivers regarding the value and rate of return of Suncor's portfolio of assets. Carbon intensity and associated carbon costs of assets are considered during potential acquisitions and divestitures. The current initiatives toward divestment of oil & gas commitments have caused certain investors and insurers to either reduce or eliminate their exposure to the sector. Notwithstanding the efforts of those few to divest from oil & gas, some new investors have entered oil and gas positions and some remaining investors have been willing to increase their investment in oil and gas, so the net impact on Suncor is negligible at this time. Risks and opportunities that influence financial planning range from short- to long-term.

C3.5

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

	Identification of spending/revenue that is aligned with your organization's climate transition	Indicate the level at which you identify the alignment of your spending/revenue with a sustainable finance taxonomy
Row 1	No, and we do not plan to in the next two years	<Not Applicable>

C4. Targets and performance

C4.1

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

C4.1a

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

Target reference number
Abs 1

Is this a science-based target?
Yes, we consider this a science-based target, but we have not committed to seek validation of this target by the Science Based Targets initiative within the next two years

Target ambition
Other, please specify (Internally defined target parameters and methodology)

Year target was set
2021

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2

Scope 2 accounting method
Market-based

Scope 3 category(ies)
<Not Applicable>

Base year
2019

Base year Scope 1 emissions covered by target (metric tons CO2e)
27696335

Base year Scope 2 emissions covered by target (metric tons CO2e)
1527544

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)
<Not Applicable>

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

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target (metric tons CO2e)
<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
27223897

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
100

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)
<Not Applicable>

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

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
100

Target year
2050

Targeted reduction from base year (%)
100

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
0

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
27345420

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
1469350

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

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

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

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

<Not Applicable>

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
28814770

Does this target cover any land-related emissions?
Please select

% of target achieved relative to base year [auto-calculated]
-5.84366374880128

Target status in reporting year
Please select

Please explain target coverage and identify any exclusions

Plan for achieving target, and progress made to the end of the reporting year
<Not Applicable>

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

C4.2

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

C4.2b

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

Target reference number
Oth 1

Year target was set
2021

Target coverage
Company-wide

Target type: absolute or intensity
Absolute

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

Other, please specify	Other, please specify (This target covers the entire value chain including exported power. The purpose is to incentivize emissions reduction in the base business and growth in low emissions product offerings. Several categories listed are represented by this target.)

Target denominator (intensity targets only)
<Not Applicable>

Base year

Figure or percentage in base year

Target year

Figure or percentage in target year

Figure or percentage in reporting year

% of target achieved relative to base year [auto-calculated]
<Calculated field>

Target status in reporting year
Underway

Is this target part of an emissions target?
Reduce emissions by 10 Mt across Suncor's value chain by 2030, approximately half of which is expected to be in scope 1 and 2 emissions reductions. There is no base year for emissions in this target, but emissions rediuctions taking place after 2020 will be counted as progress towards it.

Is this target part of an overarching initiative?
No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions
This target covers emissions across the entirety of Suncor's value chain: emissions reductions realized outside of our scope 1 and 2 emissions are to be achieved through production and distribution of biofuels, with the benefit being realized in scope 3 category 11 emissions, as well as by providing power to the Alberta grid with cogen, which has a lower carbon intensity than grid average.

Plan for achieving target, and progress made to the end of the reporting year
For emissions reductions in the value chain outside of scope 1 and 2, a new cogen power plant is under construction,renewable fuel belnding capacity is being inncreased, and renewable fuel co processing is under development.

List the actions which contributed most to achieving this target
<Not Applicable>

C4.2c

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

Target reference number
NZ1

Target coverage
Company-wide

Absolute/intensity emission target(s) linked to this net-zero target
Abs1

Target year for achieving net zero
2050

Is this a science-based target?
Yes, we consider this a science-based target, but we have not committed to seek validation of this target by the Science Based Targets initiative within the next two years

Please explain target coverage and identify any exclusions
Our net zero target applies to all scope 1 and 2 emissions, on an equity share basis

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

Planned milestones and/or near-term investments for neutralization at target year
Reduce emissions by a minimum of 10Mt across Suncor's value chain by 2030, with approximately half of these reductions taking place within our scope 1 and 2 emissions.

Planned actions to mitigate emissions beyond your value chain (optional)
Export excess power generated by cogen to the Alberta grid (40% lower carbn intensity as compared to the Alberta grid)

C-OG4.2d

(C-OG4.2d) Indicate which targets reported in C4.1a/b incorporate methane emissions, or if you do not have a methane-specific emissions reduction target for your oil and gas activities, please explain why not and forecast how your methane emissions will change over the next five years.

We do not have a specific target for methane. Over the next five years methane emissions are not expected to change unless a favourable emissions reduction opportunity presents itself. Managing methane emissions will be done under Suncor's existing leak detection and repair (LDAR) program.

C4.3

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

C4.3a

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

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	5	4460000
To be implemented*	2	4000000
Implementation commenced*	1	700000
Implemented*	0	0
Not to be implemented	0	

C4.3b

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

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
30633

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
4805211

Investment required (unit currency – as specified in C0.4)
500000

Payback period
1-3 years

Estimated lifetime of the initiative
3-5 years

Comment
Oil sands base plant: hot process water optimization project

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
43

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
6724

Investment required (unit currency – as specified in C0.4)
500000

Payback period
1-3 years

Estimated lifetime of the initiative
3-5 years

Comment
Oil sands base plant: fuel gas utilization optimization to reduce flaring

C4.3c

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

Method	Comment
Dedicated budget for low-carbon product R&D	Technology and innovation are critical to achieving our goals and executing on our strategy and strategic objectives. From 2021 to 2025, we expect to spend approximately 10% of our annual capital budget, on average, on projects aimed at lowering our emissions and advancing low-carbon energy offerings, of which a significant portion would be allocated to projects that provide strong, double-digit returns. In 2022, we allocated approximately $540 million, or 11% of total capital and 35% of economic capital, to low-carbon initiatives, much of which was allocated to the Base Plant Cogeneration project. We are allocating additional funds and resources to a portfolio of early-stage decarbonization initiatives, primarily in the design and development stage, to advance base business optimization and low-carbon business expansion.
Employee engagement	Suncor is building forums for employees to promote internal engagement and learning opportunities. In 2021, we relaunched the Suncor Sustainability Network to improve sustainability acumen, integration and communication within the company. Suncor employees take individual accountability for reducing waste and improving energy efficiency as part of our employee engagement initiative. This initiative extends from lunchtime sessions on energy conservation to recognizing employees for energy efficiency and special recognition for GHG emission reduction projects through Suncor Excellence Awards. Additionally, initiatives are underway to engage with business units and employees in regard to methods of meeting our GHG objectives, including presentations at internal conferences and articles in internal communication channels (e.g. website, email updates).
Internal price on carbon	An internal carbon price is applied in the annual business planning process for each of our facilities to understand the impact that the expected carbon regulations will have on our operating costs. The internal cost of carbon is also applied to all of our potential growth projects and strategies to assess the viability of the projects over the long term.
Internal incentives/recognition programs	Executive compensation plans are a principal component of board oversight and are closely tied to our strategy execution and business and sustainability performance. Starting in 2022, we strengthened the link between the compensation of our executives and Suncor's sustainability performance; we introduced a component of executive compensation that will be directly determined by progress relative to the company's climate initiatives. By linking long-term executive compensation to climate-related initiatives, we are reinforcing Suncor's objective of attaining net-zero emissions by 2050. Vesting of the initial award will be based on progress from 2022 through 2024 toward our 2030 target to reduce annual GHG emissions by 10 megatonnes (Mt) across our value chain.
Marginal abatement cost curve	Suncor applies internal and external marginal abatement cost curves to prioritize mitigation projects and rank specific opportunities. The carbon price outlook is used to evaluate abatement economics.
Partnering with governments on technology development	Suncor collaborates with the following government-based organizations: Emissions Reduction Alberta supports projects that help Alberta to reduce greenhouse gas emissions and adapt to climate change. Alberta Innovates - to help drive research and accelerate technologies that improve overall environmental performance.
Other (Partnering with Academia)	Suncor provides in-kind and/or funding support toward academic research in the areas of energy systems, energy & climate change policies, carbon lifecycle modelling and analysis, technology development and carbon sequestration initiatives.
Other (Energy Management Systems (EMS))	Energy is one of Suncor's largest inputs creating a natural incentive for us to continue to reduce our overall energy use and the related emissions. The EMS includes both installed energy monitoring equipment as well as a process followed at each of our key operating facilities that provides real time energy information to operators, allowing them to correct and optimize energy inputs on a continuous basis.
Other (Operational Reliability and Continuous Improvement)	Operational Reliability and Continuous Improvement driven by Suncor's focus on operational excellence is another method used by our company to increase our efficiency and thereby reducing Suncor's emissions. Suncor's operational excellence extends through our integrated business, applying consistent stringent standards and practices to improve overall performance. GHG benefits include reduced downtime and start-up.

C4.5

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

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation
Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon
No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)

Biofuels	Bioethanol

Description of product(s) or service(s)
Suncor's Ethanol Plant (St. Clair, Ontario) produces biofuel that is blended into gasoline and diesel to reduce the carbon intensity of the fuel purchased by our customers in our downstream operations. Suncor avoids thousands of tonnes of CO2e per year through the development, deployment and operation of renewable energy facilities. These avoided emissions are not currently deducted from our reported corporate wide GHG totals.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)
Yes

Methodology used to calculate avoided emissions
Other, please specify (Comparative LCA using Global Warming Potentials – Environment Canada Global Warming Potentials)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
Cradle-to-grave

Functional unit used
36.7 g CO2e per MJ - Carbon intensity (CI) of ethanol

Reference product/service or baseline scenario used
94.8 g CO2e per MJ - Carbon intensity (CI) of gasoline provided by CFR

Life cycle stage(s) covered for the reference product/service or baseline scenario
Cradle-to-grave

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario
490000

Explain your calculation of avoided emissions, including any assumptions
The difference between the functional unit used and the reference product/service baseline used multiplied by Suncor's 2022 ethanol production to estimate the avoided emissions.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year
0.003

C-OG4.6

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

Suncor's Oil Sands, In Situ, and Refinery facilities, have a fugitive emissions management program implemented at the site to control and reduce emissions from equipment leaks. Those detected leaks that have a safety hazard are fixed as soon as possible, and other leaks are repaired on time as per the regulatory requirements. We usually do not vent gas streams during normal operations, and we strive to conserve when we can (if a low-pressure system exists that we can tie into) and flare the gas to a minimum. Some small remote pipeline sites without electrical power use natural gas to run pneumatics, but these are gradually being replaced by small instrument air or solar-powered control packages. Additional methane emissions are from tailings ponds and exposed mine surfaces at Suncor's oil sands facilities. Suncor continues to explore better technologies and data mapping algorithms that improve the cost-effectiveness and reliability of advanced alternate methodologies to understand methane emissions from these sources. Monitoring technology development includes optical remote sensing that can measure methane concentrations along a pathway over the source areas, methane sensors mounted on drones or fixed-wing airplanes that can measure the concentrations of methane along with vertical plume screens or boxed downwind of emitting sources, and satellite-mounted sensors that measure methane column densities in the air column above sources. These detection technologies help Suncor better understand where and when methane emissions come from area sources, helping improve reduction efforts. Methane reduction efforts being examined regarding emissions from tailings ponds include looking into froth treatment technologies and tailings handling techniques that may reduce the precursors to methane building up in tailings ponds.

C-OG4.7

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

C-OG4.7a

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

Suncor's In Situ facilities comply with the provincial and federal methane regulations. The frequency of inspections is as required by the regulations. Sites use optical gas imaging (OGI) cameras and US EPA Method 21 inspections as leak detection methodologies. Leak repair confirmation is performed by US EPA Method 21. In addition to complying with existing regulatory requirements, Suncor works with COSIA to develop new methods of detecting fugitive methane emissions. Suncor has invested in additional human and financial resources to ensure smooth implementation of the new provincial/federal LDAR regulatory requirements.

C-OG4.8

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

Intermittent flaring during process fluctuations is part of the process in Suncor's oil production activities. Suncor does not have a separate goal for reducing flaring in operations. As flaring is included in Scope 1 emissions, the Flaring Reduction Programs are currently covered within the scope of our objective to reach net-zero emissions by 2050, including an interim target of 10 megatonnes (Mt) per year by 2030 across our value chain.

In Flaring Reduction Programs, Suncor is making efforts to manage and minimize the flaring. In Suncor upstream oil sands facilities, great efforts have been put in fuel gas optimization which includes developing better fuel gas blending controller and utilization. The implementation of those projects has allowed a better fuel gas distribution within the plant and therefore minimize implementation of those projects has allowed a better fuel gas distribution within the plant and therefore minimizes fuel gas and hydrogen flaring.

C5. Emissions methodology

C5.1

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

No

C5.1a

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

Row 1

Has there been a structural change?

Yes, an acquisition

Name of organization(s) acquired, divested from, or merged with

Syncrude

Details of structural change(s), including completion dates

Suncor assumed operatorship of the Syncrude Project on September 30, 2021. All 2018-2022 performance data will now include Syncrude, unless otherwise stated.

C5.1b

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

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in methodology	We have updated our GHG intensity methodology. Given the complexity of our integrated model, we are updating our reporting methodology to capture total production as the sum of all liquid hydrocarbons produced from our business activities. This recognizes that emissions occur from each production activity, regardless of whether the resulting salable products are internally consumed. Our previous reporting of GHG intensity deducted product transfers within our business and did not reflect the many activities involved in making both intermediate and final products. Due to this change, corporate GHG intensity values are lower than previously reported, although absolute emissions remain the same. To better support peer comparisons, we are also reporting GHG data by product type, in addition to providing it by facility and business unit. This methodology change occurs in our climate report and report on sustainability but does not affect how emissions are reported to regulators.

C5.1c

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

	Base year recalculation	Scope(s) recalculated	Base year emissions recalculation policy, including significance threshold	Past years' recalculation
Row 1	Yes	Scope 2, market-based	Emissions are restated as Suncor has assumed operatorship of Syncrude. All emissions and production numbers are restated to consider Suncor's working interest in Syncrude (58.76%).	Yes

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

Scope 1

Base year start
January 1 2022

Base year end
December 31 2022

Base year emissions (metric tons CO2e)
27345420

Comment
Direct emissions - definition and category aligned with Environmental Canada GHGRP guidance. This restatement of the base year reflects Suncor assuming operatorship of Syncrude. Please note that this number is stated on a working interest basis.

Scope 2 (location-based)

Base year start
January 1 2022

Base year end
December 31 2022

Base year emissions (metric tons CO2e)

Comment
Purchased electricity and steam use grid electricity emission factor and general steam emission factor. Please refer to the scope 2 (market-based) value for Suncor's base year emissions.

Scope 2 (market-based)

Base year start
January 1 2022

Base year end
December 31 2022

Base year emissions (metric tons CO2e)
1469350

Comment
Purchased electricity and steam use supplier-specific emission factors.

Scope 3 category 1: Purchased goods and services

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not calculated or disclosed.

Scope 3 category 2: Capital goods

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not calculated or disclosed.

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

Base year start
January 1 2022

Base year end
December 31 2022

Base year emissions (metric tons CO2e)
7500000

Comment
Category 3 is based on the total volume of natural gas used in Suncor’s oil sands mining, in situ and refining operations, on a working interest basis (excluding diesel). Suncor estimates the extraction, production and transportation emissions associated with natural gas supplied to our operations. We estimate this range to be between 5-10 Mt.

Scope 3 category 4: Upstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not calculated or disclosed.

Scope 3 category 5: Waste generated in operations

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not calculated or disclosed.

Scope 3 category 6: Business travel

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not calculated or disclosed.

Scope 3 category 7: Employee commuting

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not calculated or disclosed.

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not calculated or disclosed.

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not calculated or disclosed.

Scope 3 category 10: Processing of sold products

Base year start
January 1 2022

Base year end
December 31 2022

Base year emissions (metric tons CO2e)
7500000

Comment
Category 10 is based on the volume of intermediate products sold by Suncor to other refineries and the regions to which they were sold, on a working interest basis. Intermediate products assessed include bitumen, synthetic crude oil and offshore crude oil. We estimate this range to be between 5-10 Mt.

Scope 3 category 11: Use of sold products

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
122900000

Comment
The estimated range of emissions on use of sold products is between 23 - 123 MtCO2e. GHG emissions from the use of sold products (category 11) is by far the most material scope 3 category for Suncor, which is consistent with other integrated energy producers. Due to the integrated nature of Suncor's business, scope 3 (category 11) emissions can be calculated at various stages of production. The International Petroleum Industry Environmental Conservation Association, or IPIECA, provides guidance on methodologies, considerations and reporting elements that Suncor has considered in the calculation of our scope 3 emissions. We recognize that stakeholders are interested in understanding our emissions and to remain transparent, we have provided our scope 3 emissions using multiple methodologies (these are not additive). Estimates of Suncor's scope 3 emissions are based on three different calculation methodologies: Upstream production = 123Mt; Refining throughput = 58Mt; Branded sales = 23Mt.

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

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not calculated or disclosed.

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not calculated or disclosed.

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not calculated or disclosed.

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not calculated or disclosed.

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not calculated or disclosed.

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not calculated or disclosed.

C5.3

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

American Petroleum Institute Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry, 2009
Canadian Association of Petroleum Producers, Calculating Greenhouse Gas Emissions, 2003
IPCC Guidelines for National Greenhouse Gas Inventories, 2006
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
The Greenhouse Gas Protocol: Scope 2 Guidance
US EPA Center for Corporate Climate Leadership: Indirect Emissions From Purchased Electricity
US EPA Center for Corporate Climate Leadership: Direct Emissions from Stationary Combustion Sources
US EPA Center for Corporate Climate Leadership: Direct Emissions from Mobile Combustion Sources
US EPA Mandatory Greenhouse Gas Reporting Rule
Other, please specify (IPCC Fifth Assessment Report, 2014; Canada's National Inventory Report (NIR), 2020; Canadian federal and provincial Greenhouse Gas Quantification regulations, WCI Final Essential Requirements and others)

C6. Emissions data

C6.1

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

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)
33515277

Start date
January 1 2022

End date
December 31 2022

Comment
Scope 1 (Direct Emission) are emissions from sources that are owned and controlled by Suncor. In 2022, Suncor's gross global Scope 1 emissions are calculated as per Environment Canada Facility Greenhouse Gas Reporting Program guidance, including reporting boundary, emission category, calculation methodology and global warming potentials.

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)
32691859

Start date
January 1 2021

End date
December 31 2021

Comment
Scope 1 (Direct Emission) are emissions from sources that are owned and controlled by Suncor, this value including Syncrude. In 2021, Suncor's gross global Scope 1 emissions are calculated as per Environment Canada Facility Greenhouse Gas Reporting Program guidance, including reporting boundary, emission category, calculation methodology and global warming potentials.

Past year 2

Gross global Scope 1 emissions (metric tons CO2e)
32020958

Start date
January 1 2020

End date
December 31 2020

Comment
Scope 1 (Direct Emission) are emissions from sources that are owned and controlled by Suncor, this value including Syncrude. In 2020, Suncor's gross global Scope 1 emissions are calculated as per Environment Canada Facility Greenhouse Gas Reporting Program guidance, including reporting boundary, emission category, calculation methodology and global warming potentials.

Past year 3

Gross global Scope 1 emissions (metric tons CO2e)
33673722

Start date
January 1 2019

End date
December 31 2019

Comment
Scope 1 (Direct Emission) are emissions from sources that are owned and controlled by Suncor, this value including Syncrude. In 2019, Suncor's gross global Scope 1 emissions are calculated as per Environment Canada Facility Greenhouse Gas Reporting Program guidance, including reporting boundary, emission category, calculation methodology and global warming potentials.

Past year 4

Gross global Scope 1 emissions (metric tons CO2e)
32412166

Start date
January 1 2018

End date
December 31 2018

Comment
Scope 1 (Direct Emission) are emissions from sources that are owned and controlled by Suncor, this value including Syncrude. In 2018, Suncor's gross global Scope 1 emissions are calculated as per Environment Canada Facility Greenhouse Gas Reporting Program guidance, including reporting boundary, emission category, calculation methodology and global warming potentials.

C6.2

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

Row 1

Scope 2, location-based
We are reporting a Scope 2, location-based figure

Scope 2, market-based
We are reporting a Scope 2, market-based figure

Comment
Scope 2 includes emissions from energy purchased or acquired and consumed by Suncor. It includes the emissions from purchased electricity, steam, heat and cooling. Scope 2 emission are considered an indirect emissions source (along with Scope 3), because the emissions are a consequence of activities of the reporting organization but actually occur at sources owned or controlled by another organization (i.e. an electricity generator or utility).

In 2022, Suncor location-based Scope 2 emissions are calculated based on generic emission factors (i.e. grid electricity emission factor, natural gas boiler steam generation emission factor, and chilled water emission factor). Suncor market-based Scope 2 emissions are calculated by using supplier-specific emission factors for purchased commodity, or determined by developing facility-specific methodology.

C6.3

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

Reporting year

Scope 2, location-based
1360576

Scope 2, market-based (if applicable)
1386799

Start date
January 1 2022

End date
December 31 2022

Comment
Indirect (Scope 2) includes emissions from energy purchased or acquired and consumed by the reporting company. It includes the emissions from purchase electricity, steam, heat and cooling.

For Suncor facilities, the difference between location-based and market-based emissions are from electricity and steam purchased from known specific sources (e.g. Cogen plants) (MacKay River In-situ, Sania Refinery, and Commerce City Refinery), and steam purchased from Hydrogen plant (Edmonton Refinery), and cooling water purchased from waste water treatment plant (Edmonton Refinery). This value includes Syncrude (aquired in Sept 2021), but it excludes energy imports to the Syncrude assets which is a facility that net exports electricity to the grid.

Past year 1

Scope 2, location-based
1422332

Scope 2, market-based (if applicable)
1328901

Start date
January 1 2021

End date
December 31 2021

Comment
Indirect (Scope 2) includes emissions from energy purchased or acquired and consumed by the reporting company. It includes the emissions from purchase electricity, steam, heat and cooling.

For Suncor facilities, the difference between location-based and market-based emissions are from electricity and steam purchased from known specific sources (e.g. Cogen plants) (MacKay River In-situ, Sania Refinery, and Commerce City Refinery), and steam purchased from Hydrogen plant (Edmonton Refinery), and cooling water purchased from waste water treatment plant (Edmonton Refinery). This value includes Syncrude (aquired in Sept 2021), but it excludes energy imports to the Syncrude assets which is a facility that net exports electricity to the grid.

Past year 2

Scope 2, location-based
1355672

Scope 2, market-based (if applicable)
1291049

Start date
January 1 2020

End date
December 31 2020

Comment
Indirect (Scope 2) includes emissions from energy purchased or acquired and consumed by the reporting company. It includes the emissions from purchase electricity, steam, heat and cooling.

For Suncor facilities, the difference between location-based and market-based emissions are from electricity and steam purchased from known specific sources (e.g. Cogen plants) (MacKay River In-situ, Sania Refinery, and Commerce City Refinery), and steam purchased from Hydrogen plant (Edmonton Refinery), and cooling water purchased from waste water treatment plant (Edmonton Refinery). This value includes Syncrude (aquired in Sept 2021), but it excludes energy imports to the Syncrude assets which is a facility that net exports electricity to the grid.

Past year 3

Scope 2, location-based
1484542

Scope 2, market-based (if applicable)
1402111

Start date
January 1 2019

End date
December 31 2019

Comment
Indirect (Scope 2) includes emissions from energy purchased or acquired and consumed by the reporting company. It includes the emissions from purchase electricity, steam, heat and cooling.

For Suncor facilities, the difference between location-based and market-based emissions are from electricity and steam purchased from known specific sources (e.g. Cogen plants) (MacKay River In-situ, Sania Refinery, and Commerce City Refinery), and steam purchased from Hydrogen plant (Edmonton Refinery), and cooling water purchased from waste water treatment plant (Edmonton Refinery). This value includes Syncrude (aquired in Sept 2021), but it excludes energy imports to the Syncrude assets which is a facility that net exports electricity to the grid.

Past year 4

Scope 2, location-based
1637843

Scope 2, market-based (if applicable)
1497574

Start date
January 1 2018

End date
December 31 2018

Comment
Indirect (Scope 2) includes emissions from energy purchased or acquired and consumed by the reporting company. It includes the emissions from purchase electricity, steam, heat and cooling.

For Suncor facilities, the difference between location-based and market-based emissions are from electricity and steam purchased from known specific sources (e.g. Cogen plants) (MacKay River In-situ, Sania Refinery, and Commerce City Refinery), and steam purchased from Hydrogen plant (Edmonton Refinery), and cooling water purchased from waste water treatment plant (Edmonton Refinery). This value includes Syncrude (aquired in Sept 2021), but it excludes energy imports to the Syncrude assets which is a facility that net exports electricity to the grid.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?
No

C6.5

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

Purchased goods and services

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
2000000

Emissions calculation methodology
Supplier-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
This is an approximate value for the emissions associated with hydrogen purchased from suppliers to the Edmonton and Sarnia refineries. Other scope 3 category 1 emissions are not calculated.

Capital goods

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
All upstream (cradle-to-gate) emissions of purchased capital goods are not currently calculated.

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

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
7500000

Emissions calculation methodology
Please select

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
We have an estimated range of 5-10 Mt for category 3 emissions. Based on the total volume of natural gas used in Suncor's oil sands mining, in situ and refining operations, on a working interest basis (excludes diesel). Estimates the extraction, production and transportation emissions associated with natural gas supplied to our operations. Emissions factors from Environment and Climate Change Canada were used to estimate the carbon intensity of the production and distribution of the natural gas used by Suncor. High degree of confidence in methodology, but emission factors are subject to variation, depending on the source.

Upstream transportation and distribution

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
All transportation and distribution of products purchased are not currently calculated.

Waste generated in operations

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Disposal and treatment of waste generated in operations (in facilities not owned or controlled) are not currently calculated.

Business travel

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
All transportation of employees for business-related activities (in vehicles not owned or operated) are not currently calculated. Suncor does collect information on emissions from business travel through commercial flight for both upstream and downstream facilities. Data from third party flight booking company and Suncor internal aviation system. This also includes the fuel consumption in fleet.

Employee commuting

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
All transportation of employees between their homes and their worksites (in vehicles not owned or operated) are not currently calculated. Suncor does collect information on emissions from bus diesel fuel consumption for non-operation related activities.

Upstream leased assets

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
All emissions from operation of assets leased are not currently calculated. Suncor does collect information on emissions from primary office buildings metered electrical use and upstream camps natural gas consumption.

Downstream transportation and distribution

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
All emissions from transportation and distribution of products sold are not currently calculated.

Processing of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
7500000

Emissions calculation methodology
Please select

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
We have an estimated range of 5-10 Mt for category 10 emissions. Based on the volume of intermediate products sold by Suncor to other refineries and the regions to which they were sold, on a working interest basis. Intermediate products assessed include bitumen, synthetic crude oil and offshore crude oil. Includes refining that takes place within and outside Canada. Estimate could vary from year to year, depending on which refiners/regions take Suncor feedstock.

Use of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
126000000

Emissions calculation methodology
Hybrid method
Average product method
Fuel-based method
Asset-specific method
Site-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
The estimated range of emissions on use of sold products is between 24 - 126 MtCO2e. GHG emissions from the use of sold products (category 11) is by far the most material scope 3 category for Suncor, which is consistent with other integrated energy producers. Due to the integrated nature of Suncor's business, scope 3 (category 11) emissions can be calculated at various stages of production. The International Petroleum Industry Environmental Conservation Association, or IPIECA, provides guidance on methodologies, considerations and reporting elements that Suncor has considered in the calculation of our scope 3 emissions. We recognize that stakeholders are interested in understanding our emissions and to remain transparent, we have provided our scope 3 emissions using multiple methodologies (these are not additive). Estimates of Suncor's scope 3 emissions are based on three different calculation methodologies: Upstream production = 126Mt; Refining throughput = 61Mt; Branded sales = 24Mt. Suncor holds all the necessary information for the 'use of sold products' emissions estimate.

End of life treatment of sold products

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Since Suncor assumes its hydrocarbon products are combusted, there are no further end of life treatments assumed.

Downstream leased assets

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
All emissions from operation of assets leased are not currently calculated.

Franchises

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
All emissions from operation of franchises are not currently calculated.

Investments

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Our 'use of sold products' calculation includes hydrocarbon from our invested, but not operated, assets.

Other (upstream)

Evaluation status
Not evaluated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Other (downstream)

Evaluation status
Not evaluated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

C6.5a

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

Past year 1

Start date
January 1 2021

End date
December 31 2021

Scope 3: Purchased goods and services (metric tons CO2e)
0

Scope 3: Capital goods (metric tons CO2e)
0

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
0

Scope 3: Upstream transportation and distribution (metric tons CO2e)
0

Scope 3: Waste generated in operations (metric tons CO2e)
0

Scope 3: Business travel (metric tons CO2e)
0

Scope 3: Employee commuting (metric tons CO2e)
0

Scope 3: Upstream leased assets (metric tons CO2e)
0

Scope 3: Downstream transportation and distribution (metric tons CO2e)
0

Scope 3: Processing of sold products (metric tons CO2e)
0

Scope 3: Use of sold products (metric tons CO2e)
128000000

Scope 3: End of life treatment of sold products (metric tons CO2e)
0

Scope 3: Downstream leased assets (metric tons CO2e)
0

Scope 3: Franchises (metric tons CO2e)
0

Scope 3: Investments (metric tons CO2e)
0

Scope 3: Other (upstream) (metric tons CO2e)
0

Scope 3: Other (downstream) (metric tons CO2e)
0

Comment

Past year 2

Start date
January 1 2020

End date
December 31 2020

Scope 3: Purchased goods and services (metric tons CO2e)
0

Scope 3: Capital goods (metric tons CO2e)
0

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
0

Scope 3: Upstream transportation and distribution (metric tons CO2e)
0

Scope 3: Waste generated in operations (metric tons CO2e)
0

Scope 3: Business travel (metric tons CO2e)
0

Scope 3: Employee commuting (metric tons CO2e)
0

Scope 3: Upstream leased assets (metric tons CO2e)
0

Scope 3: Downstream transportation and distribution (metric tons CO2e)
0

Scope 3: Processing of sold products (metric tons CO2e)
0

Scope 3: Use of sold products (metric tons CO2e)
123000000

Scope 3: End of life treatment of sold products (metric tons CO2e)
0

Scope 3: Downstream leased assets (metric tons CO2e)
0

Scope 3: Franchises (metric tons CO2e)
0

Scope 3: Investments (metric tons CO2e)
0

Scope 3: Other (upstream) (metric tons CO2e)
0

Scope 3: Other (downstream) (metric tons CO2e)
0

Comment

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?
No

C6.10

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

Intensity figure
0.000554403

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
34875853

Metric denominator
unit total revenue

Metric denominator: Unit total
62907000000

Scope 2 figure used
Location-based

% change from previous year
33.2

Direction of change
Decreased

Reason(s) for change
Change in revenue

Please explain
Emission increased by: 2.2%; Revenue increased by: 52.9%; results in decrease of intensity figure in 2022 by: 33.2%

Intensity figure
0.044964105

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
34875853

Metric denominator
unit of production

Metric denominator: Unit total
775637644

Scope 2 figure used
Location-based

% change from previous year
3.04

Direction of change
Decreased

Reason(s) for change
Change in output

Please explain
Emission increased by: 2.2%; Production increased by: 5.3%; results in decrease of intensity figure in 2022 by: 3.04%

C-OG6.12

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

Unit of hydrocarbon category (denominator)
Thousand barrels of oil sands (includes bitumen and synthetic crude)

Metric tons CO2e from hydrocarbon category per unit specified
78.6

% change from previous year
5

Direction of change
Decreased

Reason for change
Both 2021 and 2022 data includes Syncrude SCO production. In 2022, Fort Hills went back to two-train operations, which had a significant increase in production. Syncrude had a significant increase in production in 2022 due to plant optimization.

Comment
The denominator is Suncor upstream In-situ bitumen and Fort Hills bitumen productions, and upstream SCO production (Suncor Oil Sands Base Plant and Syncrude). This value excludes solids, gases and non-hydrocarbons such as petroleum coke, fuel gas and sulphur. This value is compiled from Base Plant and Syncrude.

Unit of hydrocarbon category (denominator)
Thousand barrels of crude oil/ condensate

Metric tons CO2e from hydrocarbon category per unit specified
0

% change from previous year
0

Direction of change
No change

Reason for change
Our Terra Nova facility is still not producing.

Comment
The denominator is a crude oil that is produced by offshore facilities and this excludes gases associated with petroleum gas. It includes production from the Terra Nova facility, which has been shut in since the fourth quarter of 2019.

Unit of hydrocarbon category (denominator)
Thousand barrels of refinery net production

Metric tons CO2e from hydrocarbon category per unit specified
24.18

% change from previous year
7

Direction of change
Decreased

Reason for change
In 2022, Suncor downstream refining and supply facilities had higher production, after the major facility turnarounds in 2021.

Comment
The demominator is the salable yield of liquid hydrocarbons produced at refineries and includes products such as gasoline, distillates, LPGs, intermediates, heavy fuel oils, petrochemical feedstocks, highly viscous liquid or semi-solid hydrocarbons like asphalt. It excludes solids and non-hydrocarbons such as petroleum coke, sodium bisulphite and sulphur. This production value is compiled with data from our refineries in Sarnia, Montreal, Commerce City and Edmonton.

C-OG6.13

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

Oil and gas business division
Upstream

Estimated total methane emitted expressed as % of natural gas production or throughput at given division
0

Estimated total methane emitted expressed as % of total hydrocarbon production or throughput at given division
0.021

Details of methodology
The unit is tonne CH4 / m3 total upstream hydrocarbon production. The methane emissions are the total combined gross Scope 1 methane emissions from Suncor upstream facilities (including vents, leaks, etc.).

Oil and gas business division
Downstream

Estimated total methane emitted expressed as % of natural gas production or throughput at given division
0

Estimated total methane emitted expressed as % of total hydrocarbon production or throughput at given division
0.003

Details of methodology
The unit is tonne CH4 / m3 total downstream hydrocarbon production.
The methane emissions are the total combined gross Scope 1 methane emissions from Suncor downstream facilities (including vents, leaks, etc.).

C7. Emissions breakdowns

C7.1

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

C7.1a

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

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	32777585	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	591248	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	141999	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	1915	IPCC Fifth Assessment Report (AR5 – 100 year)
PFCs	1334	IPCC Fifth Assessment Report (AR5 – 100 year)
SF6	1196	IPCC Fifth Assessment Report (AR5 – 100 year)

C-OG7.1b

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

Emissions category
Fugitives

Value chain
Upstream

Product
Oil

Gross Scope 1 CO2 emissions (metric tons CO2)
400142

Gross Scope 1 methane emissions (metric tons CH4)
18051

Total gross Scope 1 emissions (metric tons CO2e)
905581

Comment
Upstream facilities include bitumen and crude oil producers

Emissions category
Fugitives

Value chain
Downstream

Product
Oil

Gross Scope 1 CO2 emissions (metric tons CO2)
0

Gross Scope 1 methane emissions (metric tons CH4)
96

Total gross Scope 1 emissions (metric tons CO2e)
2698

Comment
Downstream facilities include refineries and renewable fuel producers,and pipeline and product terminals

---

Emissions category
Venting

Value chain
Upstream

Product
Oil

Gross Scope 1 CO2 emissions (metric tons CO2)
53196

Gross Scope 1 methane emissions (metric tons CH4)
834

Total gross Scope 1 emissions (metric tons CO2e)
76534

Comment

Emissions category
Venting

Value chain
Downstream

Product
Oil

Gross Scope 1 CO2 emissions (metric tons CO2)
6046

Gross Scope 1 methane emissions (metric tons CH4)
82

Total gross Scope 1 emissions (metric tons CO2e)
8329

Comment

Emissions category
Flaring

Value chain
Upstream

Product
Oil

Gross Scope 1 CO2 emissions (metric tons CO2)
587639

Gross Scope 1 methane emissions (metric tons CH4)
564

Total gross Scope 1 emissions (metric tons CO2e)
606156

Comment

Emissions category
Flaring

Value chain
Downstream

Product
Oil

Gross Scope 1 CO2 emissions (metric tons CO2)
232109

Gross Scope 1 methane emissions (metric tons CH4)
403

Total gross Scope 1 emissions (metric tons CO2e)
244175

Comment

Emissions category
Combustion (excluding flaring)

Value chain
Upstream

Product
Oil

Gross Scope 1 CO2 emissions (metric tons CO2)
22592794

Gross Scope 1 methane emissions (metric tons CH4)
800

Total gross Scope 1 emissions (metric tons CO2e)
22712230

Comment

Emissions category
Combustion (excluding flaring)

Value chain
Downstream

Product
Oil

Gross Scope 1 CO2 emissions (metric tons CO2)
3198581

Gross Scope 1 methane emissions (metric tons CH4)
98

Total gross Scope 1 emissions (metric tons CO2e)
3213155

Comment

Emissions category
Process (feedstock) emissions

Value chain
Upstream
Downstream

Product
Oil

Gross Scope 1 CO2 emissions (metric tons CO2)
3194394

Gross Scope 1 methane emissions (metric tons CH4)
0

Total gross Scope 1 emissions (metric tons CO2e)
3194394

Comment

Emissions category
Other (please specify) (Onsite transportation)

Value chain
Upstream
Downstream

Product
Oil

Gross Scope 1 CO2 emissions (metric tons CO2)
2512684

Gross Scope 1 methane emissions (metric tons CH4)
188

Total gross Scope 1 emissions (metric tons CO2e)

2552024

Comment

C7.2

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

Country/area/region	Scope 1 emissions (metric tons CO2e)
Canada	32557714
United States of America	957562

C7.3

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

By business division
By facility
By activity

C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
Upstream	29192988
Downstream	4322289

C7.3b

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

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Oil Sands Base Plant	7719102	57.0033	-111.4661
In Situ Firebag	5400300	57.2297	-110.8325
In Situ MacKay River	419923	57.03347	-111.88712
Terra Nova FPSO	0	46.2831	-48.2851
Edmonton Refinery	1303127	53.55558	-113.33275
Montreal Refinery	1141119	45.50806	-73.57111
Sarnia Refinery	739950	42.9306	-82.4433
Commerce City Refinery	956953	39.80168	-104.94698
Montreal Sulphur Plant	20874	45.639381	-73.515457
Burrard Terminal	12611	49.283	-122.85
Canadian Pipelines	1768	57.1165	-111.1493
Renewables - St. Clair Ethanol Plant	139584	42.9294	-82.4381
Renewables - Wind	9	49.71306	-112.78745
Fort Hills	2335894	57.39207	-111.56791
US Pipelines and Terminals	609	39.1779	-108.78052
Syncrude	13317769	51.0481	-114.0633
Canadian Product Terminals	5683	43.4669	-79.6858

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Stationary combustion (for electricity generation)	3786218
Stationary combustion (for other heating use)	22139167
Process emissions	3194394
Fugitive emissions	908279
Flaring and Venting emissions	935193
Transportation	2544821
Other	7204

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

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

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	29192988	<Not Applicable>	
Oil and gas production activities (midstream)		<Not Applicable>	
Oil and gas production activities (downstream)	4322289	<Not Applicable>	
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.5

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

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Canada	1207997	1249985
United States of America	152579	136813

C7.6

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

By business division
By facility
By activity

C7.6a

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

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Upstream	573162	546546
Downstream	787414	840253

C7.6b

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

Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Oil Sands Base Plant	122	122
In Situ Firebag	0	0
In Situ MacKay River	561294	534679
Terra Nova FPSO	0	0
Fort Hills	5303	5303
Edmonton Refinery	421049	381361
Montreal Refinery	555	555
Sarnia Refinery	166702	274993
Commerce City Refinery	151751	135986
Montreal Sulphur Plant	11	11
Burrard Terminal	200	200
Canadian Pipelines	44646	44646
Renewables - St Clair Ethanol Plant	1666	1666
Renewables - Wind	7	7
US Pipelines and Terminals	827	827
Syncrude	6443	6443

C7.6c

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

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Purchased Electricity	530454	577179
Purchased Steam	825520	807417
Purchased Heat	0	0
Purchased Cooling	4603	2203

C7.7

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

No

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

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

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	573162	546546	
Oil and gas production activities (midstream)			
Oil and gas production activities (downstream)	787414	840253	
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.9

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

Increased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	5626	Increased	0.687	2022 emissions from two sources are quantified and compared to 2021: Biodiesel is consumed in Oil Sand Base Plant, Syncrude and Fort Hills for various conbustion equipments and heavy hauler/trucks for Mining site; Biogas which is generated from fermentation is consumed in Ethanol Plant in equipment.
Other emissions reduction activities	30676	Decreased	3.743	A few projects were conduced in 2022 to improve energy efficiency and therefore decreased the Scope 1 emissions. These projects include process optimization to improve heat transfer and plant reliability.
Divestment		<Not Applicable>		
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output		<Not Applicable>		
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other	794404	Decreased	96.943	In 2022, Suncor's total absolute GHG Scope 1 and 2 emissions increased compared to 2021 primarily due to increased production.

C7.9b

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

Location-based

C8. Energy

C8.1

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

More than 15% but less than or equal to 20%

C8.2

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

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

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	164490	135804012	135968502
Consumption of purchased or acquired electricity	<Not Applicable>	0	1846033	1846033
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	0	3670281	3670281
Consumption of purchased or acquired cooling	<Not Applicable>	0	15546	15546
Consumption of self-generated non-fuel renewable energy	<Not Applicable>		<Not Applicable>	
Total energy consumption	<Not Applicable>	164490	141335872	141500362

C8.2b

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

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

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

Sustainable biomass

Heating value
LHV

Total fuel MWh consumed by the organization
39838

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
39838

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
Biodiesel

Other biomass

Heating value
Please select

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

Comment
Not applicable

Other renewable fuels (e.g. renewable hydrogen)

Heating value
Please select

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

Comment
Not applicable

Coal

Heating value
LHV

Total fuel MWh consumed by the organization
12641941

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
9703052

MWh fuel consumed for self-generation of steam
2938889

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
Petroleum Coke

Oil

Heating value
LHV

Total fuel MWh consumed by the organization
10597410

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
10200188

MWh fuel consumed for self-generation of steam
397222

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
Diesel and gas oil

Gas

Heating value
LHV

Total fuel MWh consumed by the organization
108492438

MWh fuel consumed for self-generation of electricity
18913096

MWh fuel consumed for self-generation of heat
59807366

MWh fuel consumed for self-generation of steam
29771977

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
26206798

Comment
Natural gas and fuel gas

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

Heating value
LHV

Total fuel MWh consumed by the organization
53103

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
53103

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
Propane

Total fuel

Heating value
LHV

Total fuel MWh consumed by the organization
131824731

MWh fuel consumed for self-generation of electricity
18913096

MWh fuel consumed for self-generation of heat
79803547

MWh fuel consumed for self-generation of steam
33108088

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
26206798

Comment
Total includes: Biodiesel, Petroleum coke, Diesel and gas oil, Propane, and Natural gas and fuel gas.

C8.2d

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

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	7346104	5485721	130660	0
Heat	63842837	63842837	109287	109287
Steam	25100580	25100580	0	0
Cooling	0	0	0	0

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.

Country/area of low-carbon energy consumption
Canada

Sourcing method
Heat/steam/cooling supply agreement

Energy carrier
Heat, steam and cooling combined

Low-carbon technology type
Low-carbon energy mix, please specify (Cogeneration)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
2211308

Tracking instrument used
Contract

Country/area of origin (generation) of the low-carbon energy or energy attribute
Canada

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2004

Comment
Supply heat and power for Suncor Mackay River facility

Country/area of low-carbon energy consumption
Canada

Sourcing method
Heat/steam/cooling supply agreement

Energy carrier
Heat, steam and cooling combined

Low-carbon technology type
Low-carbon energy mix, please specify (Cogeneration)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
1099361

Tracking instrument used
Contract

Country/area of origin (generation) of the low-carbon energy or energy attribute
Canada

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2003

Comment
Supply heat and power for Suncor Sarnia Refinery facility

C8.2g

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

Country/area
Canada

Consumption of purchased electricity (MWh)
1553844

Consumption of self-generated electricity (MWh)
4177647

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
13214739

Consumption of self-generated heat, steam, and cooling (MWh)
75687180

Total non-fuel energy consumption (MWh) [Auto-calculated]
94633410

Country/area
United States of America

Consumption of purchased electricity (MWh)
292189

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
3711780

Total non-fuel energy consumption (MWh) [Auto-calculated]
4003969

C9. Additional metrics

C9.1

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

C-OG9.2a

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

	In-year net production	Comment
Crude oil and condensate, million barrels	0	2022 crude oil produced from Terra Nova FPSO is 0. Terra Nova has been shut down since December 2019 with the Asset Life Extension (ALE) plan. The Terra Nova FPSO then left the field and went quayside for all of 2022. Suncor is still determining an economically viable path forward for the safe and reliable return to operations.
Natural gas liquids, million barrels	0	No NG liquids produced from Suncor Facilities
Oil sands, million barrels (includes bitumen and synthetic crude)	371.4	2022 Bitumen and synthetic crude oil produced from Oil Sands facilities
Natural gas, billion cubic feet	0	No NG produced from Suncor Facilities

C-OG9.2b

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

Suncor reports Proved (1P) and Proved plus Probable (2P) reserves in accordance with Canadian Securities Administrators' National Instrument 51-101 "Standards of Disclosure for Oil and Gas Activities" (NI 51-101). Suncor's 2022 reserves were evaluated by independent qualified reserves evaluator, GLJ, in accordance with NI 51-101 and the Canadian Oil and Gas Evaluation (COGE) Handbook. Suncor also reports 1P reserves in accordance with the Securities and Exchange Commission (SEC).

C-OG9.2c

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

	Estimated total net proved + probable reserves (2P) (million BOE)	Estimated total net proved + probable + possible reserves (3P) (million BOE)	Estimated net total resource base (million BOE)	Comment
Row 1	5483			Volumes and percentages based on NI 51-101.

C-OG9.2d

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

	Net proved + probable reserves (2P) (%)	Net proved + probable + possible reserves (3P) (%)	Net total resource base (%)	Comment
Crude oil/ condensate/ natural gas liquids	5			4.7% Volumes and percentages based on NI 51-101
Natural gas	0			0.01% Volumes and percentages based on NI 51-101
Oil sands (includes bitumen and synthetic crude)	95			95.3% Volumes and percentages based on NI 51-101

C-OG9.2e

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

Development type
Shallow-water

In-year net production (%)
10

Net proved reserves (1P) (%)
5

Net proved + probable reserves (2P) (%)
5

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

Net total resource base (%)

Comment
Assets in water depth < 150m In-year net production: 10.4% Net proved reserves: 1P = 4.5% Net proved + probable reserves: 2P = 4.7%. In year net production numbers are as per the NI 51-101 methodology but are gross (before royalty) rather than net (after royalty).

Development type
Oil sand/extra heavy oil

In-year net production (%)
90

Net proved reserves (1P) (%)
95

Net proved + probable reserves (2P) (%)
95

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

Net total resource base (%)

Comment
Oil sand/extra heavy oil: Oil sands extraction by mining and in-situ methods and other assets that produce oil with an API gravity of less than 10°. In-year net production: 89.6% Net proved reserves: 1P = 95.5% Net proved + probable reserves: 2P = 95.3%. In year net production numbers are as per the NI 51-101 methodology but are gross (before royalty) rather than net (after royalty).

C-OG9.3a

(C-OG9.3a) Disclose your total refinery throughput capacity in the reporting year in thousand barrels per day.

	Total refinery throughput capacity (Thousand barrels per day)
Capacity	466

C-OG9.3b

(C-OG9.3b) Disclose feedstocks processed in the reporting year in million barrels per year.

	Throughput (Million barrels)	Comment
Oil	130.91	Crude oil feedstock includes conventional sweet and sour oil, and synthetic sweet and sour oil
Other feedstocks	37.24	
Total	168.15	

C-OG9.3c

(C-OG9.3c) Are you able to break down your refinery products and net production?

Yes

C-OG9.3d

(C-OG9.3d) Disclose your refinery products and net production in the reporting year in million barrels per year.

Product produced	Refinery net production (Million barrels) *not including products used/consumed on site
Gasolines	70.57
Diesel fuels	63.79
Fuel oils	23.42
Other, please specify (Distillates)	10.15
Other, please specify (LPG)	3.34

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

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

	CAPEX in the reporting year for this expansion activity (unit currency as selected in C0.4)	CAPEX in the reporting year for this expansion activity as % of total CAPEX in the reporting year	CAPEX planned over the next 5 years for this expansion activity as % of total CAPEX planned over the next 5 years	Explain your CAPEX calculations, including any assumptions
Exploration of new oil fields				
Exploration of new natural gas fields				
Expansion of existing oil fields	326000000	5.5	1.4	Considering mine expansion and offshore development
Expansion of existing natural gas fields				
Development of new coal mines	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Expansion of existing coal mines	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>

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

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

	Investment in low-carbon R&D	Comment
Row 1	Yes	We invest in our own in house technology dvelopment as well as collaborations with other developers of novel emissions reduction technology. Our areas of focus are renewable fuels, carbon capture and sequestration, hydrogen, and finding new ways to improve the efficiency of our existing operations.

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

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

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)	Average % of total R&D investment planned over the next 5 years	Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan
Carbon capture, utilization, and storage (CCUS)	Large scale commercial deployment	0	0	13	In 2021, Suncor and five other oil sands producers launched the Oil Sands Pathways to Net Zero Alliance, a globally unprecedented collaboration responsible for 95% of Canada's oil sands production, with an objective of net-zero emissions from production by 2050. The Pathways Alliance foundational project is a key part of the overall net-zero vision and will require ongoing collaboration, shared investment, and research and development on new and emerging technologies between industry and government. It will include a carbon transportation line connecting over 20 oil sands facilities in northern Alberta to a carbon sequestration hub near Cold Lake and be available to other industries interested in capturing and sequestering CO2.
Carbon capture, utilization, and storage (CCUS)	Full/commercial-scale demonstration	2	311448	3	Suncor is an investor in Svante Inc., which is developing a post combustion CO2 capture technology for industrial emissions. Svante's technology separates and captures CO2 from combustion gas products and concentrates it for industrial use or permanent storage. The capture process uses solid adsorbent materials with very high storage capacity relative to their size, dramatically reducing the time and surface area needed for storage, which reduces costs. This year Suncor is undertaking a technical feasibility study to capture emissions from fluid catalytic crackers at the Edmonton Refinery, to inform further economic and technical evaluation for deployment.
Carbon capture, utilization, and storage (CCUS)	Applied research and development	1	832092	0	R&D investments into novel or emerging carbon capture technology
Other, please specify (Solvent, SAGD efficiency and heat recovery)	Pilot demonstration	28	11496509	55	In 2020, we completed the solvent injection phase of a pad-scale ES-SAGD pilot at Firebag. In late 2022 we are planning a pad-scale demo to further evaluate production performance and solvent recovery. Another opportunity we are pursuing, the Extra Low Intensity Thermal Extraction (ELITE) process, improves the energy efficiency of SAGD by significantly lowering operating pressures. In early 2021 we initiated a two-year pad-scale pilot project at Firebag to evaluate the effectiveness of the ELITE process. Solvent-dominated processes involve the full or near-full replacement of steam with a hydrocarbon solvent and have the potential to reduce GHG emissions by up to 70%. These technologies could include solvents paired with wellbore heating, super heating or electromagnetic heating, with the addition of steam. We expect to launch a pilot project to evaluate solvent dominated technology by early 2023.
Other, please specify (Non-aqueous extraction)	Pilot demonstration	15	2005161	1	Through collaborative partnerships with research organizations and other major oil sands producers, we are pursuing new technologies that improve efficiency and reduce the need for water in bitumen extraction from mining operations. Currently, hot water is used to separate bitumen from oil sands mined ore. By replacing the use of hot water with a solvent, we could significantly reduce water usage and recover bitumen without producing waste tailings ponds. We anticipate this would accelerate land reclamation and reduce land footprint, tailings management costs and fugitive emissions. Earlier this year, we executed a joint development agreement to collaborate and collectively progress non-aqueous extraction technology.
Other, please specify (Next Generation Biofuels)	Pilot demonstration	25	5954608	1	We are continuing to targeted investments in developing commercial-ready renewable fuel technologies that provide an early mover advantage and support future expansion (e.g., Enerkem, LanzaTech, LanzaJet and advanced generation waste-based feedstocks). Over the past decade, we've made strategic investments in promising advanced-generation biofuel technologies that create ethanol and methanol from waste streams such as non-recyclable municipal waste, industrial forestry and agricultural waste biomass.
Alternative liquid fuels	Applied research and development	5	2037156	1	Suncor is investing in development of renewable liquid fuels using alternative feedstocks and integrating co processing of renewable feedstock in our refineries. These opportunities are expected to reduce our cost of meeting regulatory compliance and improve the economics of renewable fuel production.
Hydrogen	Applied research and development	3	2182254	5	Suncor has partnered with KWI Polymers Solutions to de-risk and scale up its novel hydrogen technology to a field demonstration that could produce 1,000-1,500 tonnes per year of hydrogen and 3,000-4,500 tonnes of black carbon. In early 2022 the project was selected by the Clean Resource Innovation Network for $10 million in funding. If proven and deployed at commercial scale, a facility producing 100,000 tonnes of hydrogen per year could reduce emissions by approximately 1 Mt per year. - Earlier this year Suncor also partnered with Australia-based Hazer Group and FortisBC to begin development of a 2,500 tonnes per year turquoise hydrogen facility, in which Suncor would play a leading role in engineering, construction and eventual operation. - We are part of the Alberta Zero Emissions Truck Electrification Collaboration project, a multi-party effort to design, manufacture and test long-range hydrogen-powered trucks operating between Calgary and Edmonton. This 18-month pilot with our partners is a first step to developing economically viable commercial hydrogen transport fuelling stations. Suncor is developing two hydrogen refuelling stations as part of this project.
Please select	<Not Applicable>				

C-OG9.7

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

35

C-OG9.8

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

No

C10. Verification

C10.1

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

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	No third-party verification or assurance

C10.1a

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

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
2023-suncor-assurance-statement-en.pdf

Page/ section reference
KPMG LLP Independent Practitioner's Limited Assurance Report

Relevant standard
Other, please specify (ISAE 3000, Attestation Engagements Other than Audits or Reviews of Historical Financial Information and ISAE 3410, Assurance Engagements on Greenhouse Gas Statements, issued by the International Auditing and Assurance Standards Board)

Proportion of reported emissions verified (%)
99

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
Suncor Fort Hills Verification report TPV.pdf

Page/ section reference
Fort Hills Verification

Relevant standard
Alberta Technology Innovation and Emissions Reduction (TIER)

Proportion of reported emissions verified (%)
100

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
Suncor Base Plant Verification report TPV.pdf

Page/ section reference
Base Plant Verification

Relevant standard
Alberta Technology Innovation and Emissions Reduction (TIER)

Proportion of reported emissions verified (%)
100

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
Suncor MacKay River Verification report TPV.pdf

Page/ section reference
MacKay River Verification

Relevant standard
Alberta Technology Innovation and Emissions Reduction (TIER)

Proportion of reported emissions verified (%)
100

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
Suncor Firebag Verification report TPV.pdf

Page/ section reference
Firebag Verification

Relevant standard
Alberta Technology Innovation and Emissions Reduction (TIER)

Proportion of reported emissions verified (%)
100

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
Suncor Edmonton Verification Report.pdf

Page/ section reference
Edmonton Refinery Verification

Relevant standard
Alberta Technology Innovation and Emissions Reduction (TIER)

Proportion of reported emissions verified (%)
100

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
Suncor Montreal Verification Report.pdf

Page/ section reference
Montreal Refinery Verifiation

Relevant standard
Other, please specify (Quebec: Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere)

Proportion of reported emissions verified (%)
100

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
Suncor Sarnia Verification Report.pdf

Page/ section reference
Sarnia Refinery Verification

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
Suncor St. Clair Ethanol Plant Verification Report.pdf

Page/ section reference
St. Clair Ethanol Verification

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

C10.1b

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

Scope 2 approach
Scope 2 market-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
2023-suncor-assurance-statement-en.pdf

Page/ section reference
KPMG LLP Independent Practitioner's Limited Assurance Report

Relevant standard
Other, please specify (ISAE 3000, Attestation Engagements Other than Audits or Reviews of Historical Financial Information and ISAE 3410, Assurance Engagements on Greenhouse Gas Statements, issued by the International Auditing and Assurance Standards Board)

Proportion of reported emissions verified (%)
94

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?
No, we do not verify any other climate-related information reported in our CDP disclosure

C11. Carbon pricing

C11.1

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

C11.1a

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

Alberta TIER - ETS
BC carbon tax
Canada federal fuel charge
Newfoundland and Labrador PSS - ETS
Ontario EPS - ETS
Prince Edward Island carbon tax
Québec CaT - ETS
Other carbon tax, please specify (Northwest Territories)
Other carbon tax, please specify (New Brunswick)

C11.1b

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

Alberta TIER - ETS

% of Scope 1 emissions covered by the ETS
100

% of Scope 2 emissions covered by the ETS
100

Period start date
January 1 2022

Period end date
December 31 2022

Allowances allocated
27879689

Allowances purchased
2226881

Verified Scope 1 emissions in metric tons CO2e
30471996

Verified Scope 2 emissions in metric tons CO2e
857304

Details of ownership
Facilities we own and operate

Comment
This includes Syncrude, Oil Sands Base Plant, Firebag, Mackay River, Fort Hills and Edmonton Refinery.

Newfoundland and Labrador PSS – ETS

% of Scope 1 emissions covered by the ETS
100

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1 2022

Period end date
December 31 2022

Allowances allocated
0

Allowances purchased
0

Verified Scope 1 emissions in metric tons CO2e
0

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment
Includes Terra Nova floating production storage and offloading vessel situated off the east coast of Canada. Production at Terra Nova has been shut in since the fourth quarter of 2019, therefore there was no carbon compliance payment for 2022.

Ontario EPS - ETS

% of Scope 1 emissions covered by the ETS
100

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1 2022

Period end date
December 31 2022

Allowances allocated
892636

Allowances purchased
0

Verified Scope 1 emissions in metric tons CO2e
879534

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment
This includes Sarnia Refinery and St. Clair Ethanol Plant

Québec CaT - ETS

% of Scope 1 emissions covered by the ETS
100

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1 2022

Period end date
December 31 2022

Allowances allocated
1032670

Allowances purchased
108449

Verified Scope 1 emissions in metric tons CO2e
1141119

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment
Includes Montreal Refinery and Montreal Sulphur Plant

C11.1c

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

BC carbon tax

Period start date
January 1 2022

Period end date
December 31 2022

% of total Scope 1 emissions covered by tax
69.84

Total cost of tax paid
309867840

Comment
Total carbon levy collected and paid to the provincial government in 2022

Canada federal fuel charge

Period start date
January 1 2022

Period end date
December 31 2022

% of total Scope 1 emissions covered by tax
0

Total cost of tax paid
1054945013

Comment
Total carbon levy collected and paid to the government in 2022 in Manitoba, British Columbia, Ontario, Saskatchewan and Yukon

Prince Edward Island carbon tax

Period start date
January 1 2022

Period end date
December 31 2022

% of total Scope 1 emissions covered by tax
0

Total cost of tax paid
4851621

Comment
Total carbon levy collected and paid to the provincial government in 2022

Other carbon tax, please specify

Period start date
January 1 2022

Period end date
December 31 2022

% of total Scope 1 emissions covered by tax
0

Total cost of tax paid
6575942

Comment
New Brunswick total carbon levy collected and paid to the provincial government in 2022

Other carbon tax, please specify

Period start date
January 1 2022

Period end date
December 31 2022

% of total Scope 1 emissions covered by tax
0

Total cost of tax paid
1910098

Comment
Northwest Territories total carbon levy collected and paid to the provincial government in 2022

C11.1d

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

Suncor follows a low-cost compliance strategy where cost-effective facility emissions reductions are pursued first, followed by retiring offset credits generated from our facilities, followed by offset purchases and secondary market purchases of allowances. Suncor also has refineries in Ontario and Quebec, both of which were covered by a Cap and Trade system in 2018. Suncor has joint ownership in UK North Sea assets but these assets are operated by another company whose responsibility includes compliance with the European Union Emissions Trading Scheme.

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?
No

C11.3

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

C11.3a

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

Type of internal carbon price
Shadow price

How the price is determined
Please select

Objective(s) for implementing this internal carbon price
Change internal behavior
Drive energy efficiency
Drive low-carbon investment
Identify and seize low-carbon opportunities
Navigate GHG regulations
Stakeholder expectations
Stress test investments

Scope(s) covered
Scope 1
Scope 2

Pricing approach used – spatial variance
Please select

Pricing approach used – temporal variance
Other, please specify (Shadow pricing)

Indicate how you expect the price to change over time
<Not Applicable>

Actual price(s) used – minimum (currency as specified in C0.4 per metric ton CO2e)
65

Actual price(s) used – maximum (currency as specified in C0.4 per metric ton CO2e)
170

Business decision-making processes this internal carbon price is applied to
Capital expenditure
Product and R&D
Risk management
Opportunity management
Public policy engagement

Mandatory enforcement of this internal carbon price within these business decision-making processes
Yes, for some decision-making processes, please specify (As per responses to section above, carbon price is required in all capital planning and corporate decision making processes.)

Explain how this internal carbon price has contributed to the implementation of your organization's climate commitments and/or climate transition plan
As part of its ongoing business planning, Suncor assesses future costs associated with GHG emissions in its operations and the evaluation of future projects, informed by the expected pricing by the federal Canadian government. The carbon price range is from $65/tonne in 2023 to $170/tonne by 2030. This expected price was to support out 2030 goal of 10 Mt reductions across the value chain by 2030 and net zero from our operations by 2050.

C12. Engagement

C12.1

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

Yes, our suppliers
Yes, our customers/clients

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement
Information collection (understanding supplier behavior)

Details of engagement
Collect GHG emissions data at least annually from suppliers
Collect targets information at least annually from suppliers
Collect climate-related risk and opportunity information at least annually from suppliers

% of suppliers by number
90

% total procurement spend (direct and indirect)
50

% of supplier-related Scope 3 emissions as reported in C6.5
0

Rationale for the coverage of your engagement
We continue to partner with suppliers who share our values and align with our strategic objectives: seeking opportunities to reduce environmental impacts, supporting the communities where we work and live, and collectively contributing to economic growth. We engage with our suppliers on their sustainability performance by assessing sustainability performance as part of prequalification, awarding of work and ongoing supplier performance, gathering data to understand the effects of our supply chain, which helps us make more informed decisions, evaluating sustainability risks and opportunities in our supply chain and building relationships with like-minded suppliers to accelerate innovation and sustainability performance.
Suncor's supplier risk identification process begins with a pre-screening process through our prequalification tool in Ariba. This process ensures current and potential Contractors meet Suncor's minimum requirements in EH&S and regulatory, legal, quality and finance and sustainability. Suncor has a Sustainability Supplemental which is used in the qualification and selection process. This supplemental is weighted at 15% of our overall commercial score and includes questions related to:
1. Indigenous business
2. Greenhouse gases and climate change
3. Community investment
4. Inclusion & diversity
5. Human Rights & Business Ethics
Maturing relationships with a diverse range of suppliers is important as we look to move our company and industry from supply arrangements that are transactional in nature to partnerships that are more strategic. Working together with our vast supply chain network, we are attempting to leverage our collective strengths to amplify innovation and drive sustainability performance. These discussions also contribute to a different way of assessing our suppliers' service offerings. Suncor remains committed in working with and advancing business with suppliers, and will endeavor to make the right business and social decisions at every opportunity.

Impact of engagement, including measures of success
In 2022, Suncor had 6,636 suppliers. It is our intention to have 90% of Suncor's suppliers subscribed to Suncor's prequalification program. Due to prequalification tool change in 2022 Suncor is currently in the process of re-prequalifiying all applciable suppliers. We continue to engage with our key suppliers and industry partners to accelerate innovation and sustainability performance. Suncor and our key suppliers share best practices to achieve continuous improvement in sustainability performance throughout the value chain.

Comment
In 2018 Supply Chain Management (SCM) Sustainability formalized a SCM Sustainability Strategy. It was developed based on our materiality assessment. The process accounted internal and external inputs/material issues. This identified 6 priority areas for us and the systematic approach to gathering information based on risk at all step of our supply chain. The areas of focus are designed to progress sustainability strategy and align with our objectives, including our Journey of Reconciliation and GHG objectives and target.

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Education/information sharing	Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number

% of customer - related Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement

Suncor remains committed to providing our customers with multiple low-carbon fueling choices. In addition to providing fast-charging EV infrastructure, we continue to reduce the emissions intensity of our liquid fuels in several other ways. One way is through biofuel blending. Suncor owns and operates the largest ethanol plant in Canada, which provides the ethanol we blend into our gasoline. Commercial customers occasionally inquire about Suncor's climate change position and actions; questionnaires are completed as required for commercial contracts and bids. PumpTalk is a blog created by Petro-Canada, a Suncor business, to share information and engage in discussion about a number of topics, such as fuel efficiency and product responsibility. In our weekly posts, we discuss subjects that we believe are important and are of interest to drivers everywhere. Here you'll find posts on gas prices, reducing fuel costs, sustainability, auto industry innovation, electric vehicle charging stations and vehicle safety and maintenance, as well as posts on climate change as it relates to the energy industry and our shared responsibility. Suncor's Report on Sustainability and its Climate Report are published to encourage further engagement with Suncor on its climate change position and actions.

Impact of engagement, including measures of success

While we continue to reduce the emissions intensity of our liquid fuels, we are evolving and expanding our current product offering to meet growing customer demand. Through our Petro-Canada™ brand, we completed construction of Canada's Electric Highway™, a coast-to-coast electric vehicle (EV) fast-charging network spanning more than 57 Petro-Canada™ stations. These sites are positioned no further than 250 kilometres apart and provide universal charging options to a variety of electric vehicles. We invested in level three direct-current fast chargers, a step-change technology that is built beyond the needs of today's EV technology and positioned for the future of EV charging in Canada. This exciting initiative supports customers wanting to reduce their carbon footprint with choices for their energy needs and enables us to learn more about this emerging market as we continue to evaluate options and respond to evolving customer needs.

C12.2

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

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

C12.3

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

Row 1

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

Yes, we engage directly with policy makers
Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate
Yes, we fund organizations or individuals whose activities could influence policy, law, or regulation that may impact the climate

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

No, and we do not plan to have one in the next two years

Attach commitment or position statement(s)

<Not Applicable>

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

Engagement and dialogue are essential to developing relationships and understanding diverse perspectives and experiences, as we seek common solutions to our shared climate objectives. Stakeholder engagement provides the opportunity to share Suncor's progress and challenges, and to gather and incorporate external perspectives into our strategies and plans. We operate in many jurisdictions across North America that regulate GHG emissions. Our approach is to engage constructively with governments and relevant stakeholders and advocate for effective, pragmatic and transparent policies to address climate change. Our advocacy includes supporting wide-ranging incentives for emission reductions and removals, along with support for the Paris Agreement. Good policy instills confidence in the financial markets, industry and society and promotes economic prosperity which, in turn, enable low-carbon energy expansion and the technology and innovation needed to reduce emissions globally.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

C12.3a

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

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

Clean Fuel Regulations

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

Low-carbon products and services

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

Other, please specify (Emissions - CO2)

Policy, law, or regulation geographic coverage
National

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

Your organization's position on the policy, law, or regulation
Support with minor exceptions

Description of engagement with policy makers
Sitting on a technical working group for the proposed Clean Fuel Regulation, as well as providing written submissions to requests for feedback.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation
The Clean Fuel Regulation is designed to set performance standards for carbon intensity of various liquid fuels used in transportation; achieve compliance by fuel switching (such as switching from bunker fuel to diesel or natural gas, and electrification) and using biofuels, then purchasing credits from others who have achieved a carbon intensity better than the standard. We have provided feedback to the government on changes that would make this regulation more effective.

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

Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?
<Not Applicable>

Specify the policy, law, or regulation on which your organization is engaging with policy makers
Investment tax credit for carbon capture use and storage

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

Focus area of policy, law, or regulation that may impact the climate
Emissions – CO2

Policy, law, or regulation geographic coverage
National

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

Your organization's position on the policy, law, or regulation
Support with minor exceptions

Description of engagement with policy makers
Meeting with multiple levels of government with industry partners to advocate for the significant deployment of CCUS in Canada. An investment tax credit would help to support the investment in CCUS. We engaged throughout 2022 and into 2023.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation
An investment tax credit for CCUS was announced as part of the Canadian federal budget, details and implementation to be worked out throughout 2022.

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

Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?
<Not Applicable>

Specify the policy, law, or regulation on which your organization is engaging with policy makers
Federal Oil and Gas Emissions Cap

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

Focus area of policy, law, or regulation that may impact the climate
Emissions – CO2

Policy, law, or regulation geographic coverage
National

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

Your organization's position on the policy, law, or regulation
Support with major exceptions

Description of engagement with policy makers
Meeting with multiple levels of government with industry partners to advocate for emissions cap that aligns with Suncor's and Pathways' decarbonization plans and does not force curtailment. We engaged throughout 2022 and into 2023.

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

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

Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?
<Not Applicable>

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

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

Focus area of policy, law, or regulation that may impact the climate
Emissions – CO2

Policy, law, or regulation geographic coverage
National

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

Your organization's position on the policy, law, or regulation
Support with major exceptions

Description of engagement with policy makers
Meeting with multiple levels of government with industry partners to advocate for regulations that do not have disproportionate impacts across the country and respects past and committed investment to technologies like cogeneration while setting an achievable standard for new investment . We engaged throughout 2022 and into 2023.

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

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

Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?
<Not Applicable>

C12.3b

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

Trade association
Other, please specify (Mining Association of Canada (MAC))

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

Has your organization attempted to influence their position in the reporting year?
Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position
The Mining Association of Canada (MAC) supports the goal of the Paris Agreement and is supportive of a just transition to a lower carbon future. This is in alignment with Suncor's position. MAC and its members are committed to supporting an orderly transition toward a lower carbon future, and to being a constructive partner in the fight against climate change. Over the past two decades, MAC's member companies have improved energy efficiency and reduced emissions at their operations through measures such as MAC's mandatory Towards Sustainable Mining (TSM) initiative and through innovations at the mine-site level. In 2016, MAC and its members released Principles for Climate Change Policy Design, notable for its inclusion of support for a broad-based price on carbon. The Principles were developed to inform the federal government as it drafted the pan-Canadian climate change framework. MAC encourages and commits its members (including oil sands mining companies) to be a constructive partner in working towards the solution for climate change.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)
358609.81

Describe the aim of your organization's funding
We support MAC's goals for its members, which include:
- Be a part of a unified voice that promotes a strong and competitive Canadian mining industry
- Capitalize on MAC's credibility with government and industry stakeholders to advance interests
- Obtain social license to operate through the Towards Sustainable Mining (TSM) program
- Access MAC's government and policy expertise, and large network of experts and partners
- Participate in committees and working groups focused on a variety of critical policy priorities
- Learn from and collaborate with peers in the industry
- Receive timely information on industry issues and MAC activities

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Trade association
Other, please specify (Canadian Fuels Association (CFA))

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

Has your organization attempted to influence their position in the reporting year?
Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position
The Canadian Fuels Association (CFA) is Canada's leading industry voice on transportation energy and a trusted partner in developing policy solutions that balance Canadians' economic and environmental performance expectations. CFA aims to drive Canada forward by promoting policies that improve industry environmental performance, protect industry competitiveness, strengthen Canada's critical energy infrastructure, and ensure dependable, safe, and environmentally responsible transportation energy is accessible to all Canadians. CFA states that climate change is an important global issue requiring action across industries and around the globe. The CFA acknowledges the need to reduce greenhouse gas emissions. It's one of our most complex, but important challenges. To address the risks of climate change, reducing GHG emissions has become an important global issue. Under the auspices of the Paris Agreement, virtually every country has committed to reduce their GHG emissions. CFA and its members support policy approaches that minimize the overall cost to society of reducing climate risks.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)
1214539.67

Describe the aim of your organization's funding
The CFA represents Canada's transportation fuels industry. The members are companies who process crude oil into essential products like transportation fuels and get those products to market. The CFA enables collaboration between industry and government (federal, provincial and municipal) and also among industry, its stakeholders and Canadians. There is a focus on environment as well as health and safety, work to promote meaningful discussion around policy choices, their benefits and their outcomes. The CFA offers access to advice, information and analysis in order to help drive informed policy decisions.

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
No, we have not evaluated

C12.3c

(C12.3c) Provide details of the funding you provided to other organizations or individuals in the reporting year whose activities could influence policy, law, or regulation that may impact the climate.

Type of organization or individual
Private company

State the organization or individual to which you provided funding
Oil Sands Pathways to Net Zero Alliance

Funding figure your organization provided to this organization or individual in the reporting year (currency as selected in C0.4)
3696000

Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate
In 2021, Suncor and five other oil sands producers – Canadian Natural, Cenovus Energy, ConocoPhillips, Imperial and MEG Energy – launched the Oil Sands Pathways to Net Zero Alliance, which operates facilities representing 95% of Canada's oil sands production. The objective is net-zero emissions from production by 2050. This ambitious effort by producers, supported by the Canadian and Alberta government, will represent approximately 1% of the carbon capture use and storage the world needs by 2050 under the IEA's NZE scenario. It is crucial to meeting Canada's climate commitments. The foundational project is a key part of the overall net-zero vision and will require ongoing collaboration, shared investment and research and development on new and emerging technologies between industry and government.

Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

C12.4

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

Publication
In voluntary sustainability report

Status
Complete

Attach the document
2023-report-on-sustainability-en.pdf

Page/Section reference
Suncor's 2023 Report on Sustainability

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Publication
In mainstream reports, incorporating the TCFD recommendations

Status
Complete

Attach the document
2023-climate-report-en.pdf

Page/Section reference
Suncor's 2023 Climate Report

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Publication
In mainstream reports

Status
Complete

Attach the document
2022-annual-report-en.pdf

Page/Section reference
Suncor's 2022 Annual Report

Content elements
Governance
Strategy
Risks & opportunities

Comment

Publication
In mainstream reports

Status
Complete

Attach the document
2023-management-proxy-circular-en.pdf

Page/Section reference
Suncor's 2023 Management Proxy Circular

Content elements
Governance
Strategy

Comment

C12.5

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

	Environmental collaborative framework, initiative and/or commitment	Describe your organization's role within each framework, initiative and/or commitment
Row 1	Task Force on Climate-related Financial Disclosures (TCFD)	Suncor publicly indicated support for TCFD in April 2018, and since then has be guided by TCFD's recommendations

C15. Biodiversity

C15.1

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

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	Yes, executive management-level responsibility	Suncor's overarching goal is to achieve world-class ESG performance. In relation to biodiversity this means being committed to preserving and promoting biodiversity in all areas where we work and includes conserving habitat and reclaiming the landscape we've disturbed. Aligned with this goal our internal sustainability statement states the following: We minimize our environmental footprint by designing and operating our facilities to use resources efficiently and by working to develop long-term solutions to global issues, including climate change and biodiversity. Suncor's commitment to biodiversity is described within our reclamation objective for oil sands projects, stated as follows: Disturbed lands shall be reclaimed to a self-sustaining, locally common boreal forest ecosystem, compatible with pre-development, including forested areas, wetlands and streams. The reclaimed lands will provide a range of end uses, including forestry, wildlife habitat, traditional use and recreation. Within the scope of Suncor's activities, biodiversity is considered at all applicable scales and biodiversity conservation is a significant consideration throughout the entire lifecycle of our operations. At the site or project level, tools such as constraints mapping, wildlife sweeps and timing restricitons are used to ensure our development activities avoid sensitive environmental areas and wildlife potentially impacted by our activities. Our wildlife standard is implemented at a regional scale to allow for meaningful actions and accountabilities to be defined through a one-way approach. This leads to an increased understanding of responsibilities and accountabilities, a reduced number of wildlife incidents and supports compliance with regulatory requirements. Because all workers are required to adhere to the wildlife standard, this creates broad adoption of industry best practice. This is further promoted through Suncor's Wildlife Committee and incorporated into mitigation practices. Wildlife Committee members are responsible for stewarding commitments at the site level and performance against targets is reported at a variety of frequencies across multiple forums. Suncor's Environment, Health, Safety and Sustainable Development Committee meets quarterly to discuss and review performance, risks, emerging trends and issues, etc. Any material issues stemming from the Wildlife Committee would be incorporated through this review.	<Not Applicable>

C15.2

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

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Adoption of the mitigation hierarchy approach Commitment to not explore or develop in legally designated protected areas Commitment to respect legally designated protected areas Commitment to avoidance of negative impacts on threatened and protected species	CBD – Global Biodiversity Framework SDG Other, please specify (Mining Association of Canada(MAC) Towards Sustainable Mining(TSM). The conservation of biodiversity is a commitment in it's Guiding Principles. As part of the initiative, we accept that a corporate commitment to biodiversity conservation is essential)

C15.3

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

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment
Yes

Value chain stage(s) covered
Direct operations

Portfolio activity
<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity
Other, please specify (EIA process)

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)
In accordance with regulation applicable to the jurisdiction of operation, approval of Suncor's projects is dependent on the completion of an environmental impact assessment (EIA), submitted at the time of application. The EIA examines the environmental effects of a project, including impacts to biodiversity, and leads to the incorporation of mitigations designed to address impacts, aligned with the mitigation heirarchy, into the project approval.

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment
No and we don't plan to within the next two years

Value chain stage(s) covered
<Not Applicable>

Portfolio activity
<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity
<Not Applicable>

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)
<Not Applicable>

C15.4

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

C15.4a

(C15.4a) Provide details of your organization's activities in the reporting year located in or near to biodiversity -sensitive areas.

Classification of biodiversity -sensitive area
Other biodiversity sensitive area, please specify (Habitat for IUCN Red List Species)

Country/area
Canada

Name of the biodiversity-sensitive area
Habitat for IUCN Red List Species

Proximity
Overlap

Briefly describe your organization's activities in the reporting year located in or near to the selected area
Approximately 50% of Suncor's oil sands lease areas in northern Alberta are within or near caribou range boundaries, a species listed as vulnerable on the IUCN Red List of Threatened Species. These leases are also entirely within the geographic range of little brown bats and located along the migration route of whooping cranes, both of which are listed as endangered on the IUCN Red List of Threatened Species.

Indicate whether any of your organization's activities located in or near to the selected area could negatively affect biodiversity
Yes, but mitigation measures have been implemented

Mitigation measures implemented within the selected area
Site selection
Project design
Scheduling
Physical controls
Restoration
Biodiversity offsets

Explain how your organization's activities located in or near to the selected area could negatively affect biodiversity, how this was assessed, and describe any mitigation measures implemented
The impacts associated with our projects located near or within habitat for IUCN Red List Species are considered through the environmental impact assessment process. The EIA examines the environmental effects of a project, including impacts to biodiversity, and leads to the incorporation of mitigations designed to address impacts, aligned with the mitigation hierarchy, into the project approval. Specifically, exploration and site preparation can disturb wildlife habitat (most notably through tree clearing) which is measured by length of linear disturbances, such as seismic lines or access roads and area of clearings such as exploration well sites, in situ facilities or oil sands mines. Mitigations applied to exploration activities include the use of low impact (minimal disturbance) best practices that promote accelerated recovery, pre-disturbance wildlife sweeps, accessing sites during frozen ground conditions and adhering to timing restrictions designed to avoid disturbances during sensitive periods for wildlife. Our oil sands facilities are located within the boreal forest which creates an additional potential to negatively impact biodiversity through direct interactions. Monitoring plans are implemented that assess the effectiveness of mitigations including such things as above ground pipeline crossings, installed to facilitate movement and connectivity across caribou habitat, at in situ facilities and at oil sands mines where bird protection plans include active monitoring of liquid impoundment facilities and placement of deterrents to discourage birds such as whooping cranes from landing.

C15.5

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

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Land/water management Species management Education & awareness Law & policy

C15.6

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

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	State and benefit indicators Pressure indicators

C15.7

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

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Impacts on biodiversity Details on biodiversity indicators Biodiversity strategy	Biodiversity and land & reclamation sections of the Report on Sustainability (pages 28-32)
Other, please specify (Annual Report)	Content of biodiversity-related policies or commitments Impacts on biodiversity Risks and opportunities	Please see page 59 of the 2023 Annual Report for more information on our Biodiversity Risk

C16. Signoff

C-FI

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

Forward-Looking Statements: These responses contain certain forward-looking statements and forward-looking information (collectively, forward-looking statements) based on Suncor's current expectations, estimates, projections and assumptions that were made by Suncor in light of information available at the time these responses were prepared. Some of the forward-looking statements may be identified by words like "expected", "will", "estimates", "could", "anticipates", "intends", "may", "forecasts", "potential", "strategy", "goal", "objective", "outlook", "target" and similar expressions. Forward-looking statements in these responses include references to: Suncor's expectations regarding its ERM program and Suncor's assessments of the various risks and opportunities it faces; Suncor's expectations regarding the impact of its climate PSUs and the linkage between executive compensation and the management of climate-related issues; statements surrounding Suncor's four long-term energy futures scenarios and its belief that each is plausible and the anticipated impacts each could have on Suncor, its operating environment and business strategy; expected regulatory changes and existing and future laws, the impact thereof, including compliance costs, and resulting opportunities for Suncor; Suncor's belief's relating to the time horizon, types of impact, the potential financial impact, likelihood, magnitude of impact of the disclosed risks, including escalating climate-related regulatory costs and constraints, changing consumer behaviour, extreme weather events and increased stakeholder expectations; the expected type of financial impact, time horizon, likelihood, potential financial impact and magnitude of impact of the disclosed opportunities, including increasing renewable energy demand, increasing biofuels demand, carbon credit offset generation, low carbon technology with adjacent industries and development of new technologies and the emerging demand for electric vehicle charging; Suncor's strategy, its expectations on how climate-related risks and opportunities will influence it and the methods Suncor plans to use to achieve its strategic objectives; statements and expectations regarding Suncor's 10Mt GHG reduction goal by 2030 and net-zero goal by 2050; Suncor's capital allocation framework and its expected capital spend on energy transition projects and the expected and potential benefits therefrom; the belief that RFS will be amended to increase the required level of biofuel, creating a stable and increasing market for biofuels; expectations regarding Suncor's investments and/or projects in (or with) Enerkem Inc., LanzaTech, LanzaJet, Inc., Svante Inc. and others, including the expected benefits of such investments; Suncor's estimate of the 10-year average, before tax cost of carbon per barrel for Upstream net production and Downstream saleable yield; the anticipated impact of Suncor's GHG goals; plans, expectations (including as to cost and timing) and results (including estimated CO_2e savings, monetary savings, payback period, investment required and lifetime) for projects, initiatives and activities undertaken by Suncor or in which Suncor is involved; the belief that technology and energy innovation has the potential to move emissions reduction from incremental to step change improvement and that the solution to lowering the carbon intensity of producing bitumen will be a hybrid of the technologies being progressed; Suncor's expectations regarding monitoring and detection technology and the impacts it may have on methane reduction; expectations regarding future technology investments and the impacts such technology may have; the expected benefits and impacts of Suncor's investments in low carbon R&D, including with respect to carbon capture and storage, Solvent SAGD efficiency and heat recovery, non-aqueous extraction, next generation biofuels, , alternative liquid fuels and hydrogen; statements and expectations regarding Suncor's coke fired boiler replacement project including the timing and anticipated benefits thereof; the belief that concerns over climate change and fossil fuel extraction could lead governments to enact additional or more stringent laws and regulations; expectations for demand for oil and refined petroleum products and for refining capacity, and the assumptions for such expectations and expectations around the sources of such products; plans and expectations, including potential benefits, around technologies and technology development; Suncor's carbon price outlook (including the anticipated benefits from using the outlook to assess investments and projects) as well as the expecting impact from carbon pricing; the expectation that the 2°C scenario will continue informing Suncor's long-term business planning and corporate strategy and allows us to understand what a pathway could entail to keep global temperatures from rising 2°C, or less, by 2100 compared with pre-industrial levels; and estimated emissions intensities and absolute emissions levels.

Forward-looking statements are not guarantees of future performance and involve a number of risks and uncertainties, some that are similar to other oil and gas companies and some that are unique to our company. Suncor's actual results may differ materially from those expressed or implied by our forward-looking statements and you are cautioned not to place undue reliance on them. Suncor's Management's Discussion & Analysis for the second quarter of 2023 and its most recently filed Annual Information Form/Form 40-F, Annual Report to Shareholders and other documents it files from time to time with securities regulatory authorities describe the risks, uncertainties, material assumptions and other factors that could influence actual results and such factors are incorporated herein by reference. Copies of these documents are available without charge from Suncor or by referring to the company's profile on SEDAR at sedar.com or EDGAR at sec.gov. Except as required by applicable securities laws, Suncor disclaims any intention or obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

C16.1

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

	Job title	Corresponding job category
Row 1	Nathan Maycher, Director Sustainability - Climate, Disclosure and Integration	Other, please specify (Sustainability Director)

SC. Supply chain module

SC0.0

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

SC0.1

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

	Annual Revenue
Row 1	62907000000

SC1.1

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

SC1.2

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

SC1.3

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

Allocation challenges	Please explain what would help you overcome these challenges
Other, please specify (There are various challenges associated)	The diversity of product lines, the large and diverse customer base, the management of different emission factors of diverse and numerous geographies are all challenges in accurately and efficiently tracking and calculating emissions to the customer level.

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?
No

SC1.4b

(SC1.4b) Explain why you do not plan to develop capabilities to allocate emissions to your customers.

We are currently not planning to develope capabilities due to the diversity of product lines, the large and diverse customer base, the management of different emission factors of diverse and numerous geographies are all challenges in accurately and efficiently tracking and calculating emissions to the customer level.

SC2.1

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

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?
No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?
No, I am not providing data

Submit your response

In which language are you submitting your response?
English

Please confirm how your response should be handled by CDP

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

Please confirm below
I have read and accept the applicable Terms