Enerplus Corporation - Climate Change 2021

C0. Introduction

C0.1

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

Enerplus Corporation (Enerplus) has a diversified portfolio of oil and gas properties throughout Western Canada and the United States. Throughout 2020, Enerplus produced an average of approximately 90,697 BOE/day, with 56% of the total production from crude oil and natural gas liquids and 44% of the total production originating from natural gas.

We have corporate offices located in Calgary, Alberta, and Denver, Colorado. Enerplus has nine offices located throughout Alberta, Saskatchewan, Colorado, Montana and North Dakota. As of December 31, 2020, Enerplus employed a total of 359 people, including full-time benefit and payroll consultants, 208 of whom were in Canada and 151 of whom were in the United States.

Enerplus strives to continuously improve the efficiency of its energy consumption, reduce our greenhouse gas emissions intensity and provide resources, training and technology to meet our environmental objectives. In 2020 we set short and long-term targets to reduce our GHG emissions intensity. In addition, we also set short and long-term targets to reduce freshwater use in our completions operations, and established a mid-term health and safety target. We have several additional ongoing environmental initiatives, including:

• greenhouse gas (GHG) emissions and small pneumatic venting equipment upgrading and inventory;

• site environmental inspection and audit program;

• water management planning including an increased focus on water recycling;

• waste management and recycling programs;

• fugitive emissions management program; and

• the remediation and reclamation of decommissioned landscapes.

In 2020, Enerplus reported its key environmental and safety metrics in its inaugural ESG Report. Enerplus' efforts in key performance indicator disclosure and community engagement demonstrate our commitment to responsible resource development and to continuous improvement in environment, health, safety and social performance.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2020	December 31 2020	Please select	<Not Applicable>

C0.3

(C0.3) Select the countries/areas for which you will be supplying data.

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

Other divisions

Please select

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(s)	Please explain
Board-level committee	The board of directors Safety and Social Responsibility (S&SR) committee was established by the Enerplus Board of Directors and has responsibility for climate-related issues, ESG strategy and metrics and additional environmental, engagement and safety metrics.

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 – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	<Not Applicable>	The manager of the Corporate Sustainability department reports to the board on relevant matters pertaining to climate-related issues such as emissions management including methane in various changing regulatory jurisdictions. Board oversight of climate related issues is integrated into board governance mechanisms when reviewing and guiding strategy, performance management, action planning, managing risks, ESG strategy and validating business plans and budgets.

C1.2

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

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

The board of directors Safety and Social Responsibility (S&SR) committee was established by the Enerplus Board of Directors to assist the board with oversight and governance of the corporation's policies, initiatives and performance to ensure that Enerplus' activities are planned and executed in a safe and responsible manner and to ensure there are adequate systems in place to support safety and environmental management. This committee is responsible for: reviewing legislative and regulatory changes that potentially have an impact on the corporation; understanding current and emerging sustainability and safety issues and evaluating the impact on the corporation; evaluating current or pending legal issues related to sustainability by or against the corporation; receiving an annual due diligence statement from the president and CEO of Enerplus. The S&SR committee reviews the corporation's performance related to S&SR quarterly and ensures that long range programs are in place to limit or mitigate future liability. The S&SR committee is comprised of, at a minimum, three independent directors which are appointed annually following the annual general meeting of the corporation. The CEO is responsible for board liaison. The S&SR board committee chair presents verbal and/or written reports regarding the corporation's S&SR performance, committee meetings and discussions at scheduled meetings of the board of directors. The Enerplus Board of Directors annually conducts and attends a sustainability and safety focused field trip to one of our operating areas.

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	In 2020, Enerplus set short and long-term emissions reduction targets which exceed compliance requirements. As part of the corporate performance scorecard system, both our ESG targets and our compliance metrics are factored into bonus structure. The board of directors benefits monetarily when Enerplus achieves its stated emissions targets and operations are compliant with all emissions and/or gas capture regulations. In 2020, Enerplus exceeded its emissions intensity target of achieving a Scope 1 & 2 emissions reduction of 10%.

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	Type of incentive	Activity inventivized	Comment
Board/Executive board	Monetary reward	Emissions reduction target Energy reduction project Other (please specify) (Compliance with emissions and gas capture regulations)	In 2020, Enerplus set short and long-term emissions reduction targets which exceed compliance requirements. As part of the corporate performance scorecard system, both our ESG targets and our compliance metrics are factored into bonus structure. The board of directors benefits monetarily when Enerplus achieves its stated emissions targets and operations are compliant with all emissions and/or gas capture regulations. In 2020, Enerplus exceeded its emissions intensity target of achieving a Scope 1 & 2 emissions reduction of 10%.
Corporate executive team	Monetary reward	Emissions reduction target Other (please specify) (Compliance with emissions and gas capture regulations)	In 2020, Enerplus set short and long-term emissions reduction targets which exceed compliance requirements. As part of the corporate performance scorecard system, both our ESG targets and our compliance metrics are factored into bonus structure. The corporate executive team benefits monetarily when Enerplus achieves its stated emissions targets and operations are compliant with all emissions and/or gas capture regulations. In 2020, Enerplus exceeded its emissions intensity target of achieving a Scope 1 & 2 emissions reduction of 10%.
All employees	Monetary reward	Emissions reduction target Energy reduction project Other (please specify) (Compliance with emissions and gas capture regulations)	In 2020, Enerplus set short and long-term emissions reduction targets which exceed compliance requirements. As part of the corporate performance scorecard system, both our ESG targets and our compliance metrics are factored into bonus structure. Employees benefit monetarily when Enerplus achieves its stated emissions targets and operations are compliant with all emissions and/or gas capture regulations. In 2020, Enerplus exceeded its emissions target of achieving a Scope 1 & 2 emissions reduction of 10%.

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	NA
Medium-term	5	10	NA
Long-term	10	30	NA

C2.1b

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

Substantive impact is defined as impacting the economic viability of an operational area or facility, triggering a new evaluation of whether the operational area or facility is a net asset or liability. For example, if the cash flows no longer exceed the anticipated abandonment costs or the cumulative positives are less than the book value (up front capital), there may be net loss.
Metrics used to determine substantive impact include: proved reserves, annual production, net income, cashflow, fixed and variable operational costs, finding and development costs and capital efficiencies. These metrics are reviewed annually. Due to variable economic parameters, specific thresholds used to determine if impacts are substantive vary by operational area.
Enerplus defines substantive as applicable to direct operations only.

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
Upstream

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

Description of process
During asset area reviews, climate-related risks (both likelihood and potential severity) are assessed using operational knowledge, current and upcoming regulatory requirements and through conversations with vendors and regulators. Risk assessments are completed annually, however additional reviews take place throughout the year as conditions change. Climate risks are evaluated based on severity and frequency to determine the appropriate risk level and to determine the controls that need to be in place to manage the climate risk. Risks are responded to in a timely manner to ensure regulatory requirements and operational objectives are met. Opportunities are presented to senior management and are integrated into overall corporate strategy development. Enerplus defines substantive impact as risks that are applicable to direct operations only. Substantive impacts affect the economic viability of an operational area or facility, triggering a new evaluation of whether the facility is a net asset or liability. For example, if the cash flows no longer exceed the anticipated abandonment costs or the cumulative positives are less than the book value (up front capital), there may be net loss. Metrics used to determine substantive impact include: proved reserves, annual production, net income, cashflow, fixed and variable operational costs, finding and development costs and capital efficiencies. These metrics are reviewed at a minimum of annually. Due to variable economic parameters, specific thresholds used to determine substantive impact vary by operational area. One example of substantive impact considered would be the lack of economically viable fresh water for hydraulic fracturing operations. If regional water shortages led to surface water withdrawal curtailments, water may have to be purchased from alternative vendors at additional cost. At some tipping point the economics of the well might no longer make business sense. These evaluations are done throughout each projects lifecycle.

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	All regulatory frameworks must be understood to ensure compliance. Internal company knowledge includes proactive awareness of all relevant regulations that must be complied with by all of our operating areas. The largest category of climate-related regulatory risks are emissions related: emissions limits, gas capture requirements, measurement and reporting requirements. Compliance is factored into all project planning and operational risk assessments.
Emerging regulation	Relevant, always included	All pending and published regulatory changes are reviewed to determine potential business impacts to Enerplus. Both routinely and if requested, feedback is provided either by Enerplus or through the several industry and trade associations we participate in, including: American Exploration & Production Council, Canadian Association of Petroleum Producers, Colorado Oil & Gas Association, Montana Petroleum Association, North Dakota Petroleum Council, the Western Energy Alliance and the Environmental Partnership. Potential regulatory changes are summarized and disseminated internally to heighten internal company knowledge and to aid in providing informed feedback to regulators. Increased potential costs of compliance with emerging regulations is included in all project planning and operational risk assessments.
Technology	Relevant, always included	This risk type is considered relevant as it relates to equipment and technology used for climate-related emission regulations. For example, pending emissions regulations in Canada will mandate the upgrade of several older technology equipment pieces. The costs of these technology upgrades are being factored into project planning and operational risk assessments. Another example is our greenfield development in Colorado where we are piloting innovative technology to significantly reduce our overall carbon footprint, exceed regulatory requirements and demonstrate our commitment to innovation.
Legal	Relevant, always included	This risk type is considered relevant but is deemed to be low risk as Enerplus is diligent in complying with all regulations, thereby limiting our exposure to climate-related legal risks.
Market	Relevant, always included	This risk type is considered relevant but is deemed to be low risk. The customers of Enerplus' produced oil and gas are midstream and/or refining companies. Long-term sales contracts are agreed upon early in project development.
Reputation	Relevant, always included	This risk type is considered relevant but is deemed to be low risk. Potential impacts to local communities are identified and mitigated within risk assessments. Enerplus proactively builds strong relationships with stakeholders in local communities impacted by our operations. In addition, Enerplus reports its impacts publicly through its ESG reporting and its external website, which is a form of reputation management.
Acute physical	Relevant, always included	Acute physical risks related to climate would include such things as cyclones, fires and floods. These risks are included in all project planning and operational risk assessments.
Chronic physical	Relevant, always included	Chronic physical risks related to climate would include localized risks as well as acute physical risks including fires, flooding, extreme temperatures and water scarcity, extended for greater durations of time. These risks are included in all project planning and operational risk assessments.

C2.3

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

Yes

C2.3a

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

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation	Carbon pricing mechanisms

Primary potential financial impact

Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

The federal government of Canada implemented a carbon tax program via the Greenhouse Gas Pollution Pricing Act, which became effective April 1, 2019 and applies in any province that has not implemented an equivalent carbon pricing scheme. The federal tax rate started at $20/tonne CO2e for fuel usage in 2019, increasing by $10/tonne per year until a maximum rate of $50/tonne is reached in 2022. In 2020, the federal carbon tax rate was $30/tonne CO2e. British Columbia's carbon tax has been in place since 2008 and was $45/tonne CO2e in 2020, rising to $50/tonne in 2021 and beyond. The province of Saskatchewan did not implement a carbon tax system therefore was deemed a "backstop" province where the federal carbon tax was applied in 2019. At the start of 2019, Alberta had a carbon tax system, however in May 2019, the newly elected government repealed the previous government's carbon pricing scheme. The Federal government then deemed Alberta a "backstop" province and imposed the federal carbon tax effective January 1, 2020. In both Alberta and Saskatchewan, the federal carbon tax rate applied in 2020 was $30/tonne CO2e for fuel that was combusted, vented or flared. The Saskatchewan, Ontario and Alberta governments challenged the constitutionality of the federal carbon tax; however, in a May 25, 2021 decision, the Supreme Court of Canada ruled that the federal carbon tax is constitutional.

Time horizon

Long-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)
400000

Potential financial impact figure – maximum (currency)
1600000

Explanation of financial impact figure
Carbon taxes in Canada are estimated at $1.6MM in 2020 based on fuel consumption. In Alberta and Saskatchewan, the carbon tax rates must follow the federal carbon pricing at $30/tonne for 2020 and increases by $10/tonne each year until it reaches $50/tonne in 2022 and beyond. In British Columbia, the carbon tax rate is $45/tonne in 2020 and increases to $50/tonne in 2021 and beyond.

Cost of response to risk
50000

Description of response and explanation of cost calculation
Enerplus will manage impacts of the carbon taxes by participating in large emitter programs, where possible, that offer carbon tax exemptions for companies who commit to long term emission reduction targets. Participating in government incentive programs requires costs associated with completing annual emission reports and contracting third-party emission verification work. Fuel efficient equipment retrofits and energy efficient project opportunities will also be analyzed. Carbon tax costs are included in strategic decision making.

Comment
The cost associated with these actions is dependent on the specific initiative chosen but could range from a small equipment optimization project (i.e., $50,000) to a larger scale project such as the electrification of a particular field (i.e., millions of dollars).

Identifier
Risk 2

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

Risk type & Primary climate-related risk driver

Chronic physical	Changes in precipitation patterns and extreme variability in weather patterns

Primary potential financial impact
Increased indirect (operating) costs

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

Company-specific description
Extreme weather conditions such as flooding, drought, snow/ice from extreme changes in precipitation are a risk to Enerplus' operations. Flood conditions prevent access to some of our sites for normal operations or drilling and completion activities. Droughts can lead to conditions conducive to wildfires and this is a significant health and safety risk for our operations. Additionally, extreme snow/cold conditions can also affect the operation of equipment and access to sites.

Time horizon
Medium-term

Likelihood
Unlikely

Magnitude of impact
Low

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

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

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

Explanation of financial impact figure
It is unknown what the financial implication of the changes in precipitation extremes and droughts will be on our operations as both the weather and activity level of the particular field change on a daily basis, although an upward limit in the range of $500,000 is not likely to be exceeded.

Cost of response to risk

Description of response and explanation of cost calculation
To manage this risk, Enerplus ensures that proactive asset integrity programs are followed, routine facility inspections are performed, along with the diligent maintenance of area specific Emergency Response Plans and the continuous training of corporate and field staff on emergency response procedures.

Comment

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
Changes in downstream customer behavior related to climate change could impact consumer demand for petroleum products. This is a risk to the upstream oil and gas industry as it would affect strategy for production volumes based on market supply and demand. Production curtailments mandated by regulatory bodies will also need to be considered and monitored.

Time horizon
Long-term

Likelihood
About as likely as not

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

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

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

Explanation of financial impact figure
It is unknown what the financial implication of the changes in consumer behavior will be as it relates to climate change and petroleum product demand, however it can be estimated in the range of $10-100 million.

Cost of response to risk

Description of response and explanation of cost calculation
To mitigate this risk, Enerplus considers alternative business models for potential future implementation.

Comment
There are no management costs associated with this risk at this time.

Identifier
Risk 4

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

Risk type & Primary climate-related risk driver

Current regulation	Mandates on and regulation of existing products and services

Primary potential financial impact
Increased indirect (operating) costs

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

Company-specific description
The federal government of Canada has set targets to reduce methane emissions by 45% from 2012 levels by 2025. The provinces of Alberta, British Columbia and Saskatchewan have each developed plans to help the country met the targets by introducing programs to regulate methane emissions from industrial operators. These programs vary by province and require a reduction of emissions set by mandating venting limits, equipment specific emission limits, leak detection and repair (LDAR) requirements, in addition to penalties for excess emissions. The cost to comply with the requirements will vary based on a number of factors, including asset inventory and power grid availability in certain areas.

Time horizon
Medium-term

Likelihood
Likely

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)
200000

Potential financial impact figure – maximum (currency)
800000

Explanation of financial impact figure
Impact of the existing methane regulations to products and services was deemed low for 2020 due to the proportion of the business affected in relation to the corporate assets. Operations in Canada are subject to these requirements, however, Canadian assets only represent 11% of Enerplus production.

Cost of response to risk

Description of response and explanation of cost calculation
Methane regulations in Alberta mandate vent limits from specific equipment such as pneumatic devices, compressors and glycol dehydrators. The Federal government also has requirements to limit NOx from stationary spark-ignition gas fired engines, which is stipulated in the Multi-Sector Air Pollutant Regulation. The financial impact figures were calculated based on estimates to update equipment to meet compliance.

Comment

Identifier
Risk 5

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

Risk type & Primary climate-related risk driver

Emerging regulation	Other, please specify

Primary potential financial impact
Increased indirect (operating) costs

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

Company-specific description
The incoming Biden administration is expected to publish draft regulations directed at the oil and gas industry. Enerplus has proactively designed facilities with minimum emissions that will mitigate risk from changing regulations.

Time horizon
Medium-term

Likelihood
Very likely

Magnitude of impact
Medium-low

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

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

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

Explanation of financial impact figure

Cost of response to risk

Description of response and explanation of cost calculation
No additional cost is currently required to manage this risk as it is being managed by our Regulatory & Government Affairs team.

Comment

C2.4

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

C2.4a

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

Identifier
Opp1

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

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Primary potential financial impact
Reduced indirect (operating) costs

Company-specific description
Enerplus is engineering a state of the art tankless gathering system in Colorado. This system addresses methane leakage by eliminating equipment at a wellsite pad that is prone to leaking GHG pollutants. Flaring of treater gas and storage vessel 'flash' emissions will be eliminated. The need for truck traffic associated with hauling is nearly eliminated with these types of facilities, therefore further reducing emissions, dust and noise.

Time horizon
Short-term

Likelihood
Very likely

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)
2000000

Potential financial impact figure – maximum (currency)
10000000

Explanation of financial impact figure
Tankless gathering eliminates the need to truck oil and water from individual pads allowing for a significant reduction in transportation costs and emissions. The need for onsite equipment such as separators, tanks and flares is also eliminated. As more wells get integrated in to this system, the financial impact increases to the higher end of the impact range.

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation
In Colorado, Enerplus operates in the Denver Front Range area, which is a difficult operating environment for traditional oil and gas operators due to the stringent and continuously evolving regulatory requirements. The innovative tankless gathering system for oil, water and gas will take emissions from our facilities to below major source permitting thresholds. Enerplus is confident it will become the operator of choice when operating in a low emissions environment.

Comment

Identifier
Opp2

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

Opportunity type
Resource efficiency

Primary climate-related opportunity driver

Primary potential financial impact
Returns on investment in low-emission technology

Company-specific description
Enerplus is considering a project in southeast Saskatchewan which would utilize waste gas that is currently being flared as a means of disposal and turn it into a useful product - power. There are no sales points or gas infrastructure pipelines near the facility. This project would eliminate flared emissions from the high pressure flare system at the facility. In 2019, Enerplus received approval from SaskPower to participate in the Power Generation Partner Program (PGPP) and sell up to 800 kW per day to SaskPower's electricity grid. The project scope is to install five 200 kW microturbine generators at Enerplus' existing Neptune battery. The high-pressure flare gas from the FWKO would be diverted from the flare stack to the microturbines where the waste gas would be combusted to generate power. This project reduces environmental impacts through emissions reduction and stabilizing the quality and reliability of power in SaskPower's electrical system.

Time horizon
Medium-term

Likelihood
More likely than not

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)
1656286

Potential financial impact figure – maximum (currency)
3928143

Explanation of financial impact figure
The financial impact figure provides a range of the estimated gross operating income if the project were to be operational from 2022 to 2030. Operating costs were estimated with an escalation of 2% per year. These costs were calculated based on information provided from similar projects. The minimum impact figure was provided based on a conservative P50 forecast for gas production which shows gas declining at 14%, while the maximum impact figure shows a decline rate of 8% per year, which is the most representative of actual and current production data.

Cost to realize opportunity
2250000

Strategy to realize opportunity and explanation of cost calculation
Enerplus' strategy to realize the opportunity is to submit an application to Natural Resources Canada's Emissions Reduction Fund, which could provide funding, in the form of a loan, for onshore methane emissions reduction projects. Successful project economics would require the procurement of specific refurbished microturbine generators. Enerplus has a potential working-interest partner who has experience with this type of project. Consistent engagement with suppliers is also required to ensure the equipment and construction can begin immediately upon anticipated application approval. The project cost calculation is estimated based on engineering design work, procurement of equipment, construction and installation, SaskPower's interconnection work (to tie facility into the local power grid), and consulting fees.

Comment

Identifier
Opp3

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

Opportunity type
Resource efficiency

Primary climate-related opportunity driver

Primary potential financial impact
Reduced indirect (operating) costs

Company-specific description
Vapor Recovery Units (VRUs) utilize a new design from Flogistix to maximize emission reductions at recent completed high rate pads. The first stage of compression pulls from the lowest pressure vapors off the tanks, like a traditional VRU. The second stage of compression, at higher pressure, is linked to the VRT/3-phase separation. Modeling, with Enerplus' predicted oil production curves, indicate we will reduce approximately 300 mcfd from this set up. Assuming emissions from the tanks and VRT/3-phase are reduced to 25% (75% control efficiency), the model indicates that we will be reducing approximately 8,300 mtCO2e/year for each VRU. Our model utilizes flash gas calculations off of the tanks via E&P Tanks. The implementation of this project will include meters to actuate the volume of gas once compressed and re-entering the sales line. We have never metered these volumes before to test our model so there is approximately 15% uncertainty in our modeled emissions reduction values.

Time horizon
Medium-term

Likelihood
Virtually certain

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)
814070

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

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

Explanation of financial impact figure
The installation and cost to run the VRUs are a cost to the company without returns or regulatory requirements. The installation may be used to generate offset credits.

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation

Comment

Identifier
Opp4

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

Opportunity type
Resource efficiency

Primary climate-related opportunity driver

Primary potential financial impact
Reduced indirect (operating) costs

Company-specific description
Bitcoin mining is used to capture two phase high pressure gas that is normally routed to flare during initial pad production. The gas is captured and used as fuel gas to run portable bit mining equipment. This reduces our VOCs and CO2e emissions.

Time horizon
Medium-term

Likelihood
Very likely

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)
0

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

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

Explanation of financial impact figure
Bitcoin mining is a beneficial onsite use of natural gas. The cost to the company is zero dollars due to the mining company generating profit via the hydrocarbon usage.

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation

Comment

Identifier
Opp5

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

Opportunity type
Resource efficiency

Primary climate-related opportunity driver

Primary potential financial impact
Reduced indirect (operating) costs

Company-specific description
An Emission Reduction Budget (ERB) is set aside with approximately 1% of Enerplus' annual capital budget dedicated to implementing emission reducing technologies.

Time horizon
Medium-term

Likelihood
Very likely

Magnitude of impact
High

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

Potential financial impact figure (currency)
2000000

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

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

Explanation of financial impact figure
An Emission Reduction Budget (ERB) is set aside with approximately 1% of Enerplus' annual capital budget dedicated to implementing emission reducing technologies.

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation

Comment

Identifier
Opp6

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

Opportunity type
Resource efficiency

Primary climate-related opportunity driver

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description
NGL Skids are used to capture two phase high pressure gas that is normally routed to flare during initial pad production. The gas is captured and condensed to natural gas liquids and sold. This project reduces VOCs and CO2e.

Time horizon
Medium-term

Likelihood
Virtually certain

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)
1244600

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

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

Explanation of financial impact figure
Total annual cost to install and operate equipment. Total cost with a monthly cost per site from $84,000-$177,800.

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation

Comment

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?
Yes

C3.1b

(C3.1b) Does your organization intend to publish a low-carbon transition plan in the next two years?

	Intention to publish a low-carbon transition plan	Intention to include the transition plan as a scheduled resolution item at Annual General Meetings (AGMs)	Comment
Row 1	No, we do not intend to publish a low-carbon transition plan in the next two years	<Not Applicable>	At this time we have not developed a low-climate transition plan, however we are in the process of developing our climate strategy which will inform our corporate strategy going forward.

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?
Yes, qualitative and quantitative

C3.2a

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

Climate-related scenarios and models applied	Details
RCP 2.6 Nationally determined contributions (NDCs) Other, please specify (Our Corporate Cashflow Model is used to continuously test affordability and the corporate bottom line. This is layered with qualitative assessments using the IPCC special report.)	In depth reviews of all new, pending and announced government climate-related policies are conducted on an on-going basis. These include, for example, carbon taxes and emissions regulations. Jurisdiction specific compliance cost estimates are determined using Enerplus' current asset and facility base. The most recent economic policy analysis was conducted in 2018 and looks forward through 2023. Areas considered within the analysis include all wells, facilities, production mix, expected growth curves and acquisitions and divestments. The results of the analysis assign a per BOE dollar cost to comply with new and pending government policy. These costs are used throughout the operational and capital budgeting process and are factored in to the business development strategy. In addition, the Nationally Determined Contributions and the IPCC Special Report on 1.5 degree global warming was reviewed to further understand our future impacts and it is being determined how to integrate it in to our future planning.
Please select	

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	Not evaluated	
Supply chain and/or value chain	Not evaluated	
Investment in R&D	Not evaluated	
Operations	Yes	In areas with existing borrow pits, heavy rainfall seasons can cause the pits to overflow, saturating the surrounding land and deteriorating nearby roads. Enerplus has strategically applied for approval to use the water from the borrow pits in Alberta and British Columbia as an offset source to drilling water wells or withdrawing from rivers. This opportunity is beneficial to the environment as well as providing a cleaner source of water for injection purposes. Water availability related to drought could have future impacts in Colorado, although the risk is minimal. In 2020, Enerplus re-designed completions strategies allowing for the use of produced water to be reused during completion activities. This strategy reduces the need for freshwater.

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	Indirect costs Capital expenditures	In areas with existing borrow pits, heavy rainfall seasons can cause the borrow pits to overflow, saturating the surrounding land and deteriorating the nearby roads. Enerplus has strategically applied for approval to use the water from borrow pits in Alberta and British Columbia as an offset source to drilling water wells or withdrawing from rivers. This opportunity is beneficial to the environment as well as providing a cleaner source of water for injection purposes. It also reduces costs associated to drilling or acquiring additional water wells. In 2020, Enerplus re-designed completions strategies allowing for the use of produced water to be reused during completion activities. This strategy reduces the need for freshwater, and also decreases water handling costs.

C3.4a

(C3.4a) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

In 2019 Enerplus reviewed climate-related risks and opportunities pertaining to both climate strategy management and water use management. These in depth reviews have led to the publication of management strategies, found within our public ESG IR Slide Deck dated February 2020. This work influenced our strategy and led to the development of greenhouse gas reduction and freshwater use reduction targets being enacted January 1, 2020.

C4. Targets and performance

C4.1

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

C4.1b

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

Target reference number
Int 1

Year target was set
2020

Target coverage
Company-wide

Scope(s) (or Scope 3 category)
Scope 1+2 (location-based)

Intensity metric
Metric tons CO2e per barrel of oil equivalent (BOE)

Base year
2019

Intensity figure in base year (metric tons CO2e per unit of activity)
0.04432523

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure
100

Target year
2020

Targeted reduction from base year (%)
10

Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]
0.039892707

% change anticipated in absolute Scope 1+2 emissions
24

% change anticipated in absolute Scope 3 emissions
0

Intensity figure in reporting year (metric tons CO2e per unit of activity)
0.03370524

% of target achieved [auto-calculated]
239.592439791063

Target status in reporting year
Achieved

Is this a science-based target?
No, and we do not anticipate setting one in the next 2 years

Target ambition
<Not Applicable>

Please explain (including target coverage)
Our short-term 2020 Scope 1 & Scope 2 emissions reduction target was exceeded. We were successful in achieving our target by extensive operational and takeaway planning. Reduced activity due to the Covid-19 pandemic contributed to additional operational downtime.

Target reference number
Int 2

Year target was set
2020

Target coverage
Company-wide

Scope(s) (or Scope 3 category)
Scope 1+2 (location-based)

Intensity metric
Metric tons CO2e per barrel of oil equivalent (BOE)

Base year
2019

Intensity figure in base year (metric tons CO2e per unit of activity)
0.04432523

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure
100

Target year
2030

Targeted reduction from base year (%)
50

Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]
0.022162615

% change anticipated in absolute Scope 1+2 emissions
24

% change anticipated in absolute Scope 3 emissions
0

Intensity figure in reporting year (metric tons CO2e per unit of activity)
0.03370524

% of target achieved [auto-calculated]
47.9184879582125

Target status in reporting year
Underway

Is this a science-based target?
No, and we do not anticipate setting one in the next 2 years

Target ambition
<Not Applicable>

Please explain (including target coverage)
Our long-term 2030 Scope 1 & Scope 2 emissions reduction target is underway. In 2020, we exceeded our short-term 10% emissions intensity reduction target, which put us well on our way to achieving our long-term 2030 target.

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?
No other climate-related targets

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.

Enerplus is in the continuous development process of setting methane emissions reduction objectives. Over the next five years, Enerplus expects methane emissions specifically to decrease due to proactive initiatives such as a comprehensive Fugitive Emissions Management Plan which increases the frequency of leak detection and repair surveys at facilities and well sites, controlling overall vent gas at facilities, limiting vent gas from pneumatic devices and compressor seals, controlling methane emissions from glycol dehydrators and the replacement of traditional thief hatches. At this time, methane emissions represent 6.5% of Enerplus' total CO2E emissions, and as we are setting corporate emissions reduction targets that became active in 2020, we will achieve a co-benefit in the reduction of methane emissions as we succeed in achieving our short and long term targets.

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	4	
To be implemented*	1	5843
Implementation commenced*	0	
Implemented*	2	13859
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)
13859

Scope(s)
Scope 1

Voluntary/Mandatory
Mandatory

Annual monetary savings (unit currency – as specified in C0.4)
0

Investment required (unit currency – as specified in C0.4)
980000

Payback period
No payback

Estimated lifetime of the initiative
1-2 years

Comment

C4.3c

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

Method	Comment
Employee engagement	All employees are encouraged to bring forward efficiency and emissions reductions ideas utilizing our 'bright idea' platform. In addition, we have a dedicated Emissions Reduction Budget (ERB) based off of our proposed goal in 2020 which drives the funding of additional emissions reduction objectives across the company.
Partnering with governments on technology development	In partnership with Energy Efficiency Alberta, Enerplus hired an onsite Energy Efficiency Manager to help identify, plan and implement energy-savings projects and reduce greenhouse gas emissions. The role supports decision making for facility improvements and ensure continued optimization in facilities.
Internal price on carbon	Enerplus' internal price on carbon aligns with the Canadian federal fuel charge rate of $30/tonne CO2e in 2020, increasing by $10/tonne per year until a maximum rate of $50/tonne is reached in 2022 and beyond.
Compliance with regulatory requirements/standards	Enerplus ensures that our operations are compliant with regulatory requirements in every jurisdiction in which we operate. Equipment retrofits, leak detection and repair (LDAR) processes and controlling vent limits are some of the practices implemented to support emission reduction activities.
Dedicated budget for energy efficiency	Emission Reduction Budget (ERB) of 1% gross annual operated budget to reduce emissions and implement new technologies.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?
No

C-OG4.6

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

Methane emissions are reduced or eliminated in Enerplus' operations where it is economically viable and technically feasible. Leak detection and repair programs are implemented at all operational locations to actively identify fugitive emissions. Vapour recovery units are installed on tanks to further capture vented gas. Throughout 2020 we endeavoured to better understand our methane emissions sources in order to set a methane emissions intensity reduction target in 2021. Detailed inventory of methane emitting equipment will be collected and quantified to support methane emission reduction projects and opportunities.

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.

Enerplus' North Dakota and Montana operating facilities have LDAR survey's completed twice a year using an optical gas imaging camera. In Colorado, inspections are conducted monthly.

In 2020, Enerplus' Canadian operations followed the Federal government's requirement for leak detection and repair (LDAR) as prescribed under the Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector). All facilities and wellsite's that produce or receive more than a combined volume of 60 e3m3 gas in a 12-month period were required to conduct triannual LDAR surveys using a gas detection meter following US EPA Method 21 protocols.

All leaks detected are fixed immediately unless they require an operational shut-down. Leaks that require an operational shut-down are fixed during the next upcoming turnaround. During the 2020 year, Enerplus conducted 722 fugitive emissions surveys throughout Canada and the United States.

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.

Flaring is relevant to Enerplus operations. Our goal is to eliminate flaring in all cases where it is economically viable and technically feasible to do so. Flaring of significant volumes of natural gas only occurs at locations that lack sufficient pipeline takeaway capacity. As pipeline infrastructure catches up to well development, pipeline capacity typically increases, which in turn decreases the overall need to flare. We understand that in order to achieve our long-term emissions intensity reduction target, we will need to reduce our flaring and are currently doing so through operational planning.

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
954520

Comment
Scope 1 emissions from Canada and US operations in 2019.

Scope 2 (location-based)

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
111734

Comment
Scope 2 emissions from Canada and US operations in 2019.

Scope 2 (market-based)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not applicable

C5.2

(C5.2) 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
IPIECA's Petroleum Industry Guidelines for reporting GHG emissions, 2003
IPIECA's Petroleum Industry Guidelines for reporting GHG emissions, 2nd edition, 2011
ISO 14064-1
The Greenhouse Gas Protocol Agricultural Guidance: Interpreting the Corporate Accounting and Reporting Standard for the Agricultural Sector
US EPA Mandatory Greenhouse Gas Reporting Rule

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)
628686

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
Scope 1 emissions from US and Canada operations in 2020.

C6.2

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

Row 1

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

Scope 2, market-based
We have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure

Comment
Scope 2 emissions are calculated based on electricity consumption and area based electricity emission factors.

C6.3

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

Reporting year

Scope 2, location-based
96698

Scope 2, market-based (if applicable)
<Not Applicable>

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
Scope 2 emission from Canada and US operations in 2020. Emissions are calculated based on electricity consumption and area specific electricity emission factors.

C6.4

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

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

Purchased goods and services

Evaluation status
Not relevant, explanation provided

Metric tonnes 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
This category is not materially relevant to Enerplus. Enerplus' focus is on emissions within its direct operational control.

Capital goods

Evaluation status
Not relevant, explanation provided

Metric tonnes 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
This category is not materially relevant to Enerplus.

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

Evaluation status
Not relevant, explanation provided

Metric tonnes 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
Enerplus includes all fuel and energy related activities within its operational boundaries in its reported Scope 1 or 2 emissions.

Upstream transportation and distribution

Evaluation status
Relevant, not yet calculated

Metric tonnes 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
This category is not materially relevant to Enerplus. Enerplus' focus is on emissions within its direct operational control.

Waste generated in operations

Evaluation status
Relevant, not yet calculated

Metric tonnes 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
This category is not materially relevant to Enerplus.

Business travel

Evaluation status
Relevant, calculated

Metric tonnes CO2e
11.79

Emissions calculation methodology
This metric is based upon information provided by and booked by our corporate travel agent.

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

Please explain
This metric is based upon information provided by our corporate travel agent and reflects business travel information that has been exclusively booked by our corporate travel agent.

Employee commuting

Evaluation status
Relevant, not yet calculated

Metric tonnes 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
Enerplus is awaiting universally applicable Scope 3 measurement and reporting standards in order to properly account for these emissions.

Upstream leased assets

Evaluation status
Not relevant, explanation provided

Metric tonnes 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
Enerplus does not have any upstream leased assets.

Downstream transportation and distribution

Evaluation status
Not relevant, explanation provided

Metric tonnes 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
This category is not materially relevant to Enerplus. Enerplus' focus is on emissions within its direct operational control.

Processing of sold products

Evaluation status
Not relevant, explanation provided

Metric tonnes 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
This category is not materially relevant to Enerplus. Enerplus' focus is on emissions within its direct operational control.

Use of sold products

Evaluation status
Not relevant, explanation provided

Metric tonnes 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
This category is not materially relevant to Enerplus. Enerplus' focus is on emissions within its direct operational control.

End of life treatment of sold products

Evaluation status
Not relevant, explanation provided

Metric tonnes 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
This category is not materially relevant to Enerplus. Enerplus' focus is on emissions within its direct operational control.

Downstream leased assets

Evaluation status
Not relevant, explanation provided

Metric tonnes 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
Enerplus does not have any downstream leased assets.

Franchises

Evaluation status
Not relevant, explanation provided

Metric tonnes 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
Enerplus does not operate any franchises.

Investments

Evaluation status
Not relevant, explanation provided

Metric tonnes 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
The category 'investments' is not applicable to Enerplus.

Other (upstream)

Evaluation status
Please select

Metric tonnes 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
Please select

Metric tonnes 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

C6.7

(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
0.0010293705

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
725384

Metric denominator
unit total revenue

Metric denominator: Unit total
704687182

Scope 2 figure used
Location-based

% change from previous year
14.51

Direction of change
Increased

Reason for change
Revenue currency is listed in CAD and is based on gross operated net revenue. Revenue fell during 2020 as the global pandemic impacted energy demand.

Intensity figure
0.033705249

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
725384

Metric denominator
barrel of oil equivalent (BOE)

Metric denominator: Unit total
21521401

Scope 2 figure used
Location-based

% change from previous year
24

Direction of change
Decreased

Reason for change
Effective planning is critical to ensure adequate gas gathering infrastructure is present in advance of production commencing. Better management of this in 2020 has helped Enerplus to significantly reduce flaring. Additionally, Enerplus continues to seek alternative technologies for beneficial use of our associated gas in areas where gathering infrastructure may be constrained to mitigate flaring whenever possible.

C-OG6.12

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

Unit of hydrocarbon category (denominator)
Other, please specify (Barrel of oil equivalent)

Metric tons CO2e from hydrocarbon category per unit specified
0.03

% change from previous year
26

Direction of change
Decreased

Reason for change

Comment

C-OG6.13

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

Oil and gas business division
Upstream

Estimated total methane emitted expressed as % of natural gas production or throughput at given division
0.426

Estimated total methane emitted expressed as % of total hydrocarbon production or throughput at given division
0.088

Comment
Calculation process includes methane reported as a mass (metric tonnes), gas volumes reported in E3m3, and total hydrocarbons based on a volumetric oil equivalent for the denominator.

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	574387	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	2102	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	1797	IPCC Fourth Assessment Report (AR4 - 100 year)

C-OG7.1b

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

Emissions category
Combustion (excluding flaring)

Value chain
Upstream

Product
Gas

Gross Scope 1 CO2 emissions (metric tons CO2)
180418.753

Gross Scope 1 methane emissions (metric tons CH4)
186.998

Total gross Scope 1 emissions (metric tons CO2e)
186697.001

Comment

Emissions category
Flaring

Value chain
Upstream

Product
Gas

Gross Scope 1 CO2 emissions (metric tons CO2)
393798.429

Gross Scope 1 methane emissions (metric tons CH4)
914.081

Total gross Scope 1 emissions (metric tons CO2e)
416845.023

Comment

Emissions category
Venting

Value chain
Upstream

Product
Gas

Gross Scope 1 CO2 emissions (metric tons CO2)
66.947

Gross Scope 1 methane emissions (metric tons CH4)
509.44

Total gross Scope 1 emissions (metric tons CO2e)
12345.664

Comment

Emissions category
Fugitives

Value chain
Upstream

Product
Gas

Gross Scope 1 CO2 emissions (metric tons CO2)
62.29

Gross Scope 1 methane emissions (metric tons CH4)
509.44

Total gross Scope 1 emissions (metric tons CO2e)
12798.281

Comment
In Enerplus' Canadian operations, fugitive emissions for 2020 are calculated based on equipment type, default leak rates, and gas volume throughput. The emissions calculations are conservative and do not represent actual leak volumes. The Canadian fugitive emissions represent 76% of the corporate emissions number. This value will be re-evaluated for 2021 based on actual data collected during leak detection and repair surveys.

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Canada	83364
United States of America	545322

C7.3

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

By business division

C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
Alberta, Canada	64627
British Columbia, Canada	4132
Saskatchewan, Canada	14605
North Dakota, US	500138
Colorado, US	14304
Montana, US	30880

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)	628686	<Not Applicable>	
Oil and gas production activities (midstream)		<Not Applicable>	
Oil and gas production activities (downstream)		<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/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh)
Canada	73777			
United States of America	22921			

C7.6

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

By business division

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)
Alberta, Canada	57718	
British Columbia, Canada	0	
Saskatchewan, Canada	16059	
North Dakota, US	17523	
Montana, US	5398	
Colorado, US	0	

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)	96698		
Oil and gas production activities (midstream)			
Oil and gas production activities (downstream)			
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?

Decreased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption		<Not Applicable>		
Other emissions reduction activities		<Not Applicable>		
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	137675	Decreased	15	In 2020, activity levels were reduced due to both economic conditions and the impacts of the Covid-19 pandemic.
Unidentified		<Not Applicable>		
Other		<Not Applicable>		

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 5% but less than or equal to 10%

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	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	1492726	1492726
Consumption of purchased or acquired electricity	<Not Applicable>	0	139918	139918
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>		<Not Applicable>	
Total energy consumption	<Not Applicable>	0	1632644	1632644

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	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

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

Fuels (excluding feedstocks)
Natural Gas

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
1402125

MWh fuel consumed for self-generation of electricity
699153

MWh fuel consumed for self-generation of heat
69515

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Emission factor
2153

Unit
kg CO2e per m3

Emissions factor source
US EPAP42 Fifth Edition Pages 1, 4-5; Enerplus facility specific gas analysis reports

Comment

Fuels (excluding feedstocks)
Diesel

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
78556

MWh fuel consumed for self-generation of electricity
78556

MWh fuel consumed for self-generation of heat
0

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Emission factor
2663

Unit
kg CO2e per m3

Emissions factor source
AP-42 Fifth Edition: United States Environmental Protection Agency; British Columbia Reporting Regulation Methodology Manual, Dec. 2009, Table 20-2.

Comment
Emission factors are based on specific equipment type. Diesel is used for completions activities via direct drive from engine to pumping units. Categories listed does not accurately define the use for that purpose therefore those allocations are not included.

Fuels (excluding feedstocks)
Propane Gas

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
12045

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
6318

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Emission factor
1510

Unit
kg CO2e per m3

Emissions factor source
British Columbia Reporting Regulation Methodology Manual, Dec. 2009, Table 20-2.

Comment
Propane is used for catadyne heaters. Propane is also used in US operations for engine starts. Categories listed does not accurately define the use for that purpose therefore those allocations are not included.

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	777709	777709		
Heat	75832	75832		
Steam				
Cooling				

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	13.42	2020 Actual Net
Natural gas liquids, million barrels	1.64	2020 Actual Net
Oil sands, million barrels (includes bitumen and synthetic crude)	0	No oil sands production.
Natural gas, billion cubic feet	69.91	2020 Actual Net

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, please explain this.

All reserves information presented herein has been prepared in accordance with NI 51-101 and is presented December 31, 2020 unless otherwise stated. The Reserves Life Indices (RLI) are based upon year-end proved and proved plus probable reserves divided by the following year's proved and proved plus probable production volumes as forecast in the independent reserves engineering reports.

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	342697	0	460897	Total resource is net TPP plus Risked Net Best Estimate Contingent Resource. We do not prepare 3P estimates.

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	53	0	50	Total resource is net TPP plus Risked Net Best Estimate Contingent Resource. We do not prepare 3P estimates.
Natural gas	47	0	50	Total resource is net TPP plus Risked Net Best Estimate Contingent Resource. We do not prepare 3P estimates.
Oil sands (includes bitumen and synthetic crude)	0	0	0	We do not have oil sands production.

C-OG9.2e

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

Development type
Onshore

In-year net production (%)
17

Net proved reserves (1P) (%)
10

Net proved + probable reserves (2P) (%)
9

Net proved + probable + possible reserves (3P) (%)
0

Net total resource base (%)
7

Comment
Total resource is net TPP plus Risked Net Best Estimate Contingent Resource. We do not prepare 3P estimates. All Enerplus production is Onshore.

Development type
Tight/shale

In-year net production (%)
83

Net proved reserves (1P) (%)
90

Net proved + probable reserves (2P) (%)
91

Net proved + probable + possible reserves (3P) (%)
0

Net total resource base (%)
97

Comment
Total resource is net TPP plus Risked Net Best Estimate Contingent Resource. We do not prepare 3P estimates.

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	No	While we endeavour to do so in the future, we have not invested in significant R&D of low-carbon services or products related to our sectors activities.

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.
37

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)	No third-party verification or assurance
Scope 3	No emissions data provided

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
Third party verification/assurance underway

Attach the statement
Verification Report - Enerplus Corporation - Enerplus Conventional Oil and Gas Aggregate Facility_2021 06 15.pdf

Page/ section reference
All pages are relevant.

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
7

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?
In progress

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.
BC carbon tax
Canada federal fuel charge
Other ETS, please specify (Alberta Technology Innovation and Emission Reduction Regulation)

C11.1b

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

Other ETS, please specify

% of Scope 1 emissions covered by the ETS
7.19

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1 2020

Period end date
December 31 2020

Allowances allocated
40724.28

Allowances purchased
4505

Verified Scope 1 emissions in metric tons CO2e
45228.65

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment
The Alberta Technology Innovation and Emissions Reduction (TIER) Regulation is an output based program that regulates facilities that emit greater than 50,000 tonnes of CO2e per year. The program allows for voluntary participation for facilities that emit less than the threshold. TIER only regulates emissions from stationary fuel combustion sources. The compliance obligation is a 10% emission reduction obligation from the company's baseline.

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 2020

Period end date
December 31 2020

% of total Scope 1 emissions covered by tax
0.66

Total cost of tax paid
86383

Comment
Enerplus ceased operations in British Columbia in March 2020. The carbon tax rate in BC for 2020 was $45/tonne CO2e. The amount BC carbon taxes paid is reflected in Canadian currency.

Canada federal fuel charge

Period start date
January 1 2020

Period end date
December 31 2020

% of total Scope 1 emissions covered by tax
2.32

Total cost of tax paid
337449

Comment
Under Canada's Greenhouse Gas Price Pollution Act (GHGPPA), the Federal Government has set a carbon pricing fee for fuel usage. The pricing was $30/tonne of CO2e in 2019 and increases by $10/tonne each year until it reaches the maximum of $50/tonne in 2022 and beyond. Each province is allowed to develop their own carbon pricing program, as long as it proves to be equivalent to the federal program. Under the GHGPPA, the Federal Fuel Charge will apply to any province that do not have their own systems. In Saskatchewan, the provincial government believes that charging a carbon tax is not an effective way to respond to climate change and therefore does not have a carbon tax regulation. By not having a program, Saskatchewan becomes a "backstop" province, therefore the federal government has imposed the Federal Fuel Charge. The government of Saskatchewan is legally challenging the constitutional validity of the "backstop" imposition at the Supreme Court of Canada. Enerplus paid the Canada Federal Fuel Charge for consumption of fuel from operations in Saskatchewan. These taxes paid are reflected in Canadian currency.

C11.1d

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

Enerplus' strategy is to improve energy performance and efficiency to reduce emissions by participating in emission reduction programs and energy efficiency projects. Through our climate and greenhouse gas reduction strategy, Enerplus will utilize funding for energy efficiency and emission reduction projects. Where possible, voluntary participation in the emission reduction programs such as Alberta's Technology Innovation and Emissions Reduction (TIER) Regulation and Saskatchewan's Output Based Performance Standard (OBPS) programs will help reduce the cost of carbon taxes payable while creating opportunities to invest in equipment or technologies to further reduce emissions. Enerplus also has an Energy Efficiency Manager that is responsible for the identification, planning and implementation of projects that reduce greenhouse gas emissions.

Enerplus is also working with an external advisory firm that specializes in carbon emissions compliance, methane management and carbon offsets to strategically identify risks and opportunities.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

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.

Objective for implementing an internal carbon price

Navigate GHG regulations
Stakeholder expectations
Change internal behavior
Drive energy efficiency
Drive low-carbon investment
Identify and seize low-carbon opportunities

GHG Scope

Scope 1

Application

The internal price on carbon is used to project future compliance costs associated with carbon taxes on fuel usage in Canada. Enerplus' operations in British Columbia are subject to the provincial carbon tax. Saskatchewan operations are subject to the Federal Fuel Charge until the appeal with the Supreme Court of Canada over the constitutionality of the carbon tax has been resolved. The Government of Alberta, is also challenging the Federal government's mandate for the carbon tax and will be subject to the Federal Fuel Charge unless activities are deemed registered and exempt under Alberta's Technology Innovation and Emissions Reduction Regulation.

Actual price(s) used (Currency /metric ton)

30

Variance of price(s) used

Evolutionary pricing: a price that develops over time. The Federal Fuel Charge tax rate in Canada is $30/tonne CO2e in 2020, increasing by $10/tonne per year until a maximum rate of $50/tonne is reached in 2022. In Alberta, the federal tax rate came into affect on January 1, 2020. The Saskatchewan government has filed an appeal with the Supreme Court of Canada to contest the federal government's mandate to enforce the carbon tax. Until a decision has been reached for the province of Saskatchewan, the Federal Fuel Charge rates will apply in that province. British Columbia's carbon tax rate in 2020 was $45/ tonne, increasing by $5/tonne until it reaches $50/tonne in 2021.

Type of internal carbon price

Shadow price

Impact & implication

Enerplus' operations in British Columbia are subject to paying the provincial carbon tax for fuel usage. In 2020, all of Enerplus' Alberta facilities were registered as an Aggregate Facility in the Alberta Technology Innovation and Emissions Reduction (TIER) Regulation on January 1, 2020 , which provides exemption from the Federal Fuel Charge. Operations in Saskatchewan are subject to the Federal Fuel Charge until a decision from the Supreme Court of Canada has been issued regarding the Provincial Government's appeal. Projects including our participation in the Energy Efficiency Alberta (EEA) program are underway to identify risks and opportunities to reduce fuel use and emissions, thereby reducing carbon tax. Enerplus continuously monitors regulatory and policy developments to understand potential impacts.

C12. Engagement

C12.1

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

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 climate change and carbon information at least annually from suppliers

% of suppliers by number
1

% total procurement spend (direct and indirect)
2

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

Rationale for the coverage of your engagement
Enerplus has corporate targets pertaining to emissions intensity reduction. It is important to engage with our suppliers to ensure they are aware of these targets and to seek to understand how suppliers can support its achievement. Collecting information and reporting to regulatory bodies is an important piece of compliance which we require our suppliers to be diligent on.

Impact of engagement, including measures of success
Success is satisfactory reporting to meet all internal and external reporting requirements

Comment

Type of engagement
Innovation & collaboration (changing markets)

Details of engagement
Run a campaign to encourage innovation to reduce climate impacts on products and services

% of suppliers by number
1

% total procurement spend (direct and indirect)
2

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

Rationale for the coverage of your engagement
Engagement with suppliers on climate change is important to Enerplus. Although we do not have formal climate change specific criteria as part of our standard bid templates and evaluation process, we do incorporate climate change criteria and targets if applicable and required for the scope of work which we are sourcing. We play a role in communicating the importance of climate change issues and adherence to reporting and regulatory requirements. Although we do not run campaigns, we encourage innovation to reduce climate impacts on products and services and look to learn and develop business relationships with suppliers who show innovation with process improvements and new technologies to help decrease costs and improve sustainability.

Impact of engagement, including measures of success
Increased selection of suppliers who share same climate change goals as Enerplus. Stronger knowledge and awareness, implementation of new technologies and processes on climate change. An example would be the new solids control system used by our drilling group. It reduces the drill cuttings that are generated which means there is less materials to dispose of and fewer disposal trucks on the road, reducing emissions.

Comment

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?
Trade associations

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?
Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association
Canadian Association of Petroleum Producers (CAPP)

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association's position
CAPP's Climate Change position relies on eight principles: 1. Oil and Gas Sector's Role in Global Energy 2. Climate Change 3. Climate Policy Development 4. Solutions Focused 5. Emissions Reduction 6. Stable Business Environment 7. Innovation and Partnership 8. Performance Operational policy principles are: -Collaborative and Solutions-Oriented: given Canada's climate commitments and industry impacts, CAPP will proactively collaborate with governments and stakeholders towards appropriate policy solutions. Policy solutions need to truly drive improvements in environmental performance, be adaptive and carefully consider environmental, economic and social outcomes. -Efficient, Effective and Predictable: climate policy should target reductions where they are most efficient and effective right across the entire energy value chain from production to end use. Climate change policies should achieve emissions reductions at the least cost to Canadians, the economy and industry. Revenues from climate policy should be fully recycled back into the economy to incent innovation, assist transition or reduce other taxes and levies. -Technology and Innovation Focused: policy should incent technology and innovation to address climate change, and capture the opportunity to export solutions to the world. Considerable future emissions reductions will stem from improving the hydrocarbon energy sector requiring continuing strong innovation and policy in these areas. -Globally Competitive: Canada's climate policies must ensure our resource development is cost and carbon competitive with other jurisdictions, especially the U.S. as our largest trading partner. Canada's climate policy leadership should bring proportionate benefits to Canada, including ensuring we receive full value for Canadian energy products through effective access to global markets. Canada is highly dependent on the development and trade of its natural resources, and on its ability to attract foreign investment. Canada's climate policies must be designed to maintain our ability to raise global investment capital.

How have you influenced, or are you attempting to influence their position?
Our CEO acts as one of 34 volunteer Governors. As part of the Board of Governors, the role includes setting priorities for the Executive Team, staff and committees.

Trade association
American Exploration & Production Council (AXPC)

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association's position
AXPC's Climate Change position: American oil and gas producers have an irreplaceable role in meeting the challenge of global climate change. AXPC, representing large independent American oil and gas producers, supports innovative, collaborative solutions that lower greenhouse gas (GHG) emissions while meeting the world's growing need for abundant, low cost, reliable energy. Successful public policy must recognize that oil and gas underpins our standard of living and American oil and gas is critical to our national security and economic prosperity. The following principles will guide AXPC's climate advocacy efforts, including policy that: -Facilitates meaningful GHG emissions reductions -Requires proportional participation from all sectors of the economy -Utilizes fair, consistent and transparent measurement methodologies across industries -Encourages and appropriately accounts for early and/or voluntary actions -Minimizes inconsistent, redundant and/or contradictory regulations and policies -Attributes to energy producers only emissions arising during production operations -Balances economic, environmental and energy security needs -Ensures the development of critical energy infrastructure -Makes the costs and associated climate benefits of any policy fully transparent to the American public -Ensures that the United States shoulders an equitable burden under international agreements -Does not disadvantage American oil and gas producers and workers against foreign competitors -Promotes innovation -Champions economy-wide public and private investment to develop cost-effective technologies that will materially reduce GHG emissions -Relies upon predictable and economically efficient policy frameworks, such as the use of market-based policies and/or offsets, to deliver outcomes at the lowest cost to society -Allows all energy sources to compete for innovation funding Additionally, AXPC Members are working to meaningfully reduce methane emissions and advocate for natural gas opportunities to reduce greenhouse gas emissions and policies that promote innovation and technology.

How have you influenced, or are you attempting to influence their position?
Our CEO is a member of the Board of Directors of AXPC.

Trade association
Western Energy Alliance (WEA)

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association's position
The Western Energy Alliance (WEA, the Alliance) represents 300 member companies engaged in all aspects of environmentally responsible exploration and production (E&P) of oil and natural gas in the western United States. The Alliance represents independent oil and gas producers in the upstream segment of the industry, the majority of which are small businesses. The WEA are experts on federal legislative, regulatory, environmental, public lands and other policy issues affecting the oil and natural gas industry. We support the WEA's interest in a vibrant western economy with robust job creation along with its dedication to working with regional stakeholders, including the public; federal, state, and local policy makers; regulatory agencies; the media; the business community; allied trade associations; civic organizations and others on all issues affecting the western oil and natural gas industry.

How have you influenced, or are you attempting to influence their position?
We are not in a position of influence within our WEA membership position.

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

The process used to ensure consistency between activities to influence public policy and our climate change strategy is to communicate with a single point of contact that is well versed on our climate change strategy. One communication path between industry and government runs through the Canadian Association of Petroleum Producers (CAPP), the main trade association for the Canadian industry. CAPP hosts conversations from individual companies and committees and compiles response letters directed to the government. These response letters must align with industry best practices, climate change strategy and commitments prior to being signed off on by member companies. If inconsistencies are found between the CAPP communication to government and our own climate change strategy, the response and/or our strategy would be revised to align.

In the US, we are members of the America Exploration & Production Council (AXPC) which, similarly to CAPP, hosts conversations from individual companies and committees and requests/compiles response letters directed to the government. If inconsistencies are found between the AXPC communication to government and our own climate change strategy, the response and/or our strategy would be revised to align. In addition, we are members of the Colorado Oil and Gas Association (COGA), the Montana Petroleum Association (MPA), the North Dakota Petroleum Council (NDPC) and the Western Energy Alliance (WEA). These state groups all serve as the primary voices of the industry at the state level and are dedicated to advocating for smart and reasonable energy policy, which is aligned with our internal practices.

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
ESGReport_2021.pdf

Page/Section reference
all pages are relevant; pages 11-14 directly relate to GHG emissions.

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

Comment
See our 2021 ESG Report.

Publication
In mainstream reports, incorporating the TCFD recommendations

Status
Complete

Attach the document
TCFD Table-June 22, 2021 Final.pdf

Page/Section reference
All pages

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment
See our TCFD Aligned Reporting Table.

Publication
In voluntary sustainability report

Status
Complete

Attach the document
Data Tables - FINAL.pdf

Page/Section reference
All pages

Content elements
Emissions figures
Other metrics

Comment
See our Data Tables for additional metrics include water and waste metrics.

C15. 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.

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Manager, Corporate Sustainability	Environment/Sustainability manager

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I am submitting to	Public or Non-Public Submission
I am submitting my response	Investors	Public

Please confirm below

I have read and accept the applicable Terms