2021 CDP CLIMATE CHANGE QUESTIONNAIRE - CP RESPONSE

Notice to users: As a core component of our sustainability practices, CP has been a contributing participant to the CDP (formerly Carbon Disclosure Project) for over a decade. The information contained within this document originates from CP's response to the CDP Climate Change 2021 Questionnaire.

As part of our transformational sustainability journey, CP is actively working with CDP to increase our transparency through continuous refinement of our sustainability disclosure and reporting practices. This document has been formatted to enhance user accessibility to important program details surrounding CP's ongoing practices to improve management of greenhouse gas emissions and energy efficiency.

For more information or questions regarding this report or sustainability at CP, please contact sustainability@cpr.ca

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CDP DISCLOSER 2021

CANADIAN PACIFIC · 1881 · CP

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C0. Introduction

C0.1

Give a general description and introduction to your organization.

Canadian Pacific Railway Limited ("CPRL"), together with its subsidiaries ("CP" or the "Company"), owns and operates a transcontinental freight railway in Canada and the U.S. CP's diverse business mix includes bulk commodities, merchandise freight and intermodal traffic across a network of approximately 13,000 miles, connecting the Atlantic coast to the Pacific coast across six Canadian provinces and 11 U.S. states. Through connections with other railways supported by a vast network of terminals, classifying yards, intermodal facilities and more than 100 transload operations, CP is able to extend our reach to customers across Canada and the U.S. On average, CP transports more than 52,000 carloads of customer goods and materials every week.

CP's 2020 total revenue was approximately C$7.7B, derived primarily from freight transportation services and divided between the following sectors:

- 43 percent bulk (grain, coal, potash, fertilizers and sulphur);
- 36 percent merchandise (energy, chemicals, plastics, metals, minerals, consumer products, and automotive and forest products); and
- 21 percent intermodal.

The transportation sector is a significant source of greenhouse gas (GHG) emissions in North America, accounting for 29 percent of Canadian and U.S. emissions in 2019. While rail transport represents only 2.3 percent of GHG emissions from the U.S. and Canada transportation sectors, the rail industry plays a major role in helping to reduce overall transportation-related GHG emissions. Freight railways have already improved fuel efficiency by more than 40 percent in the U.S. and Canada since 1990, but the railway industry has many opportunities to advance new technology and energy sources to support further decarbonization. Railways represent the most energy-efficient method of moving freight over land. A single-unit train keeps more than 300 trucks off public roads and is four times more fuel-efficient than highway transport, helping our customers further reduce GHG emissions. At CP, we have improved our fuel efficiency by 44 percent since 1990 (currently 11.3 percent better than the North American Class 1 freight railway average). As CP continues to strategically grow its business, we must continue to curtail our emissions while supporting further emissions reductions across the broader transportation sector.

In the past year, CP has undertaken several steps to advance our approach to addressing climate change, culminating in our first comprehensive climate strategy to guide our actions through 2030 and beyond. Our work started with a quantitative climate scenario analysis which enabled us to develop a broad understanding of climate-related risks and opportunities. To mitigate and manage these risks, CP developed a comprehensive Climate Strategy to drive innovation, collaboration and thought leadership across our business. The Climate Strategy includes science-based targets to provide a clear direction for CP to measure its progress as it works towards significant decarbonization. In support of achieving these goals, CP announced in December 2020 plans to develop North America's first hydrogen-powered line-haul locomotive for freight service, positioning CP on the leading edge of decarbonizing the freight transportation sector. More information can be found on CP's sustainability microsite (https://sustainability.cpr.ca/about/climate-change/).

Sources:

US EPA (2021) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2019. Retrieved from: https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks

Canada (2020) Greenhouse Gas Sources and Sinks: 2021. Retrieved from: https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/sources-sinks-executive-summary-2020.html

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
Reporting year	January 1, 2020	December 31, 2020	No

C0.3

Select the countries/areas for which you will be supplying data.

Canada

United States of America

C0.4

Select the currency used for all financial information disclosed throughout your response.

CAD

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-TO0.7/C-TS0.7

For which transport modes will you be providing data?

Rail

C1. Governance

C1.1

Is there board-level oversight of climate-related issues within your organization?

Yes

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	CP's Board of Directors (the Board) is responsible for oversight of climate change risks and opportunities. The Risk and Sustainability Committee (RSC) of the Board reviews CP's short- and long-term sustainability objectives and monitors emerging trends. As outlined in the RSC's Terms of Reference, the Risk and Sustainability Committee is, among other things, responsible for reviewing performance against sustainability objectives, plans to improve sustainability practices and reporting, and strategic plans and opportunities to ensure alignment with sustainability objectives, monitor and report to the board on emerging trends, and long-term climate strategy. The RSC of the Board meets quarterly, at a minimum, and reports regularly to the full Board of Directors. Through this structure, CP has established a clear governance structure for the Board's review of climate-related matters and an effective oversight mechanism and review of climate-related topics. Over the past year, the Chair of the RSC met with ten of CP's top shareholders (along with the Board Chair and Head of Investor Relations) to discuss perspectives on climate change. Shareholders have stated that they appreciate CP's approach to climate change and transparent communications of key milestones and timelines. CP encourages ongoing engagement with our stakeholder community on all Environmental, Social and Governance (ESG) topics material to our business, including climate change. In 2020, the RSC made one of CP's most substantial climate change decisions. The RSC reviewed and approved the alignment of CP's long-term strategic direction with a 2-degree emissions reduction trajectory, to align with the Pan-Canadian Framework on Clean Growth and Climate Change. The details of this approach are outlined in CP's new Climate Strategy, which is guided by ambitious emissions reduction targets, including a locomotive emissions intensity target that was recently approved by the Science Based Targets Initiative (SBTi). To meet these targets, CP has already started to evaluate emerging technologies, such as hydrogen-powered locomotives and renewable energy, that will support the decarbonization of CP's business.

C1.1B

Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meeting	• 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	The Board is responsible for overseeing CP's business, providing overall guidance to management on the long-term strategic direction, overseeing risk management and ensuring that CP serves the long-term interests of shareholders. CP's Board-level Risk and Sustainability Committee (RSC), provides oversight for sustainability and climate topics. The Committee has regularly scheduled meetings at least once every quarter and throughout the year as necessary, and met four times in 2020. Key objectives of these meetings were to, among other things: (1) Review CP's short- and long-term sustainability objectives and results of any internal and external stakeholder engagement, (2) Review CP's performance against our short- and long-term sustainability objectives and review plans to improve performance concerning sustainability practices and reporting, (3) Review strategic plans and opportunities for the business to ensure alignment with our sustainability objectives and long-term sustainability considerations, including climate change, workforce risks and supply chain risks, and (4) Monitor and report on emerging trends, risks or issues related to sustainability topics relevant to CP. Specifically regarding climate change, in 2020, the RSC oversaw multiple areas of progress including the completion of climate-related scenario analysis, the establishment of a framework for CP's climate strategy and guidance related to SBTi targets, expanded scope of CP's climate-related reporting, including conducting a Scope 3 emissions inventory and reviewed and approved a public-facing climate statement, which can be found on CP's sustainability website (https://sustainability.cpr.ca/about/climate-change/). More information on the Risk and Sustainability Committee is available through its Terms of Reference, which describe the Committee's structure and responsibilities. https://s21.q4cdn.com/736796105/files/doc_downloads/terms/2019/Terms-of-Reference-Risk-and-Sustainability-Committee.pdf

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)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	Quarterly

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).

CP's President & CEO, who is also a Director on the Board, holds the highest level of responsibility for organizational management and performance related to climate change. The President & CEO sets CP's broader vision in alignment with the Board and works with key leaders across the business to disseminate messages, drive performance and deliver results, including those related to sustainability and climate change.

In 2020, CP's President & CEO demonstrated the Company's commitment to climate action by approving the development of a large private solar operation at the Company's headquarters campus in Calgary, Alberta. The solar facility, which became operational in March 2021, has the capacity to generate up to five megawatts of electricity while avoiding an estimated 2,600 metric tonnes of carbon emissions a year.

CP's Senior Vice-President and Chief Risk Officer (CRO) reports to the President & CEO and is responsible for all corporate risk-related functions, including enterprise risk management (ERM) processes, environmental affairs, community and organizational safety, and sustainability policy and performance (including climate-related concerns). The CRO supports the President & CEO to ensure the corporate vision is embedded into operating plans and practices.

To drive action and ensure internal engagement on sustainability across the Company, CP's internal Sustainability Steering Committee, overseen by several senior leaders and executives, including the CRO, meets quarterly to discuss sustainability planning and CP's most material environmental, social and governance topics. Climate change, GHG emissions, mitigation measures and climate strategy are regularly addressed by the Committee. CP's Sustainability Steering Committee monitors and reports annual performance on material climate topics. Topics discussed by the Sustainability Steering Committee are communicated to the President & CEO as appropriate through the CRO.

To support the ongoing focus on climate change, CP created a new Specialist Sustainability, Climate & Energy position (reporting through the CRO) to maintain full-time responsibility for climate-related efforts, including implementing the Company's climate strategy and science-based targets. Moving forward, CP plans to establish a Carbon Reduction Task Force to lead the internal focus on decarbonization. Through this task force, CP's industry-leading engineers and operations experts will evaluate and implement climate action measures to reduce GHG emissions in alignment with CP's climate and business strategies.

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	

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
Corporate executive team	Monetary reward	Efficiency target	CP has various compensation programs designed to incentivize high-level performance and to align management's interests with the business strategy and long-term interests of CP shareholders. Management-level employees (including executives) are eligible to participate in CP's short- and long-term incentive programs which provide an annual monetary award based on achieving strong financial, safety and operational results. These programs incentivize employees to achieve results, including fuel efficiency improvements to drive economic and environmental performance. CP's short-term incentive program is available to wall non-union employees. As an energy-intensive industry, locomotive fuel consumption represents a major operating cost at CP and accounts for 96.6 percent of Scope 1 GHG emissions. Subsequently, incentive programs for operations employees are directly related to reductions in locomotive fuel conservation as a critical component of CP's response to climate change. A key component of meeting this objective is implementing the industry-leading operations Precision Scheduled Railroading (PSR) model. PSR involves constant monitoring and optimization of all railway assets and processes to maximize operational efficiency, improve outcomes for CP's stakeholders and increase safety for employees and communities. CP's 2020 locomotive fuel efficiency was 0.942 U.S. gallons of locomotive fuel consumed per 1,000 gross ton-miles (GTMs), an improvement from 0.955 U.S. gallons in 2019. CP has improved its fuel efficiency by 44 percent since 1990 and was 11.3 percent better than the North American Class 1 railroad 2020 average. This achievement was possible through the ongoing implementation of fuel savings projects, including a multi-year C$500M investment in 5,900 high-capacity grain hopper cars. By replacing aging rail cars, CP can transport more than 40 percent more grain per unit train, resulting in significant fuel savings. CP prioritizes operational efficiency as a means to maintain a competitive fuel efficiency into the future. This involves a continual review of operational plans, locomotive fleet sizing and renewal, setting fuel efficiency targets and exploring the potential for alternative fuels and emerging technologies including liquefied natural gas, renewable diesel, battery hybrids and hydrogen fuel cells in CP's locomotive fleet.

C2. Risks and opportunities

C2.1

Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1A

How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	1	
Medium-term	1	10	
Long-term	10	30	CP's climate-related scenario analysis examined potential climate-related risks and opportunities out to 2050. Therefore, when identifying, assessing and responding to climate-related impacts, CP defines long-term as up to 30 years in the future.

C2.1B

How does your organization define substantive financial or strategic impact on your business?

CP's ERM process classifies organizational risks based on severity, frequency and probability of occurrence. Through this process, risks are considered to have a substantive financial or strategic impact when the impact severity is identified as moderate, major or catastrophic. Moderate risks are identified as those with a financial impact of at least C$100M in operating costs or an event that requires up to a year of monitoring and recovery. Major risks are those likely to result in a significant disruption to business operations (such as infrastructure damage related to flooding, fire or other climate-related impacts) and identified as having a financial impact of at least C$250M with an extended negative environmental, health and safety or reputational impact on the business. Catastrophic risks cause more than C$400M of financial impact and create long-term and severe consequences for the business.

In addition to rating corporate risks by severity, we assess frequency and probability of occurrence, ranging from slight, not likely, likely, highly likely and expected. For example, a slight risk is considered to have less than 10 percent probability of occurring or may occur every 10 years or greater, while an expected risk has a 90 percent or greater probability, or has happened at least annually. Together with the quantifiable financial and environmental thresholds, the frequency and probability of occurrence contribute to our definitions of substantive financial or strategic impact when assessing climate-related risks.

C2.2

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

Value chain stage(s) covered

Direct operations
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

i) Description of process used to determine which risks and opportunities could have a substantive impact: CP's ERM program is a hybrid of the ISO 31000 standard and COSO risk management framework, providing principles, guidelines and processes for managing risks. Organizational risks or opportunities are assessed and prioritized every year based on potential impact and likelihood, taking account of financial, safety, environmental, strategic and reputational impacts, as well as existing management measures. This process results in the classification of risks from minimal to catastrophic.

For CP, moderate risks are identified as those with a substantive financial impact of at least $100 million in operating costs or an event that requires up to a year of monitoring and recovery. Major risks, likely to result in a significant disruption to business operations such as infrastructure damage related to flooding, fire or other climate-related impacts, are identified as having a financial impact of at least $250 million or extended negative environmental, health and safety or reputational impact on the business. Catastrophic risks cause more than $400 million of financial impact or create long-term and severe consequences. Through this process, CP prioritizes, manages and monitors the top significant risks (typically around 10) on a quarterly basis.

To further understand climate-related risks, CP conducted climate-related scenario analysis in 2020 to assess how policy, market, technology, reputational and physical risks may manifest in the future under multiple climate scenarios. To stress-test the business and assess its resilience in a low-carbon economy, our scenario analysis included a well-below 2°C scenario. CP's scenario analysis also considered how impacts to the business may manifest under a more modest degree of change (where climate action is slow and warming amounts to 3 to 3.5°C) as well as under a business-as-usual scenario (where no, or limited, action is taken and warming reaches 5 to 6°C).

The scenario analysis exercise assessed risks to CP's direct operations and extended value chain, including how climate-related risks and opportunities will impact customers and specifically the commodities that CP transports on their behalf. CP's Climate Strategy and TCFD Index provide further details about our identified climate-related risks and opportunities.

The scenario analysis process involved extensive input from internal experts experienced in operations, communications, regulatory compliance, marketing and environmental matters. Based on their understanding of the business, risks and opportunities were evaluated using a variety of international, national and regional databases, including the International Energy Agency (IEA), Environment and Climate Change Canada (ECCC), the National Oceanic and Atmospheric Administration and Statistics Canada. Scenario analysis was used to track emerging climate risks and determine which are most financially material for CP's business in alignment with the thresholds set by CP's ERM program. CP is in the process of integrating the climate-related risks and opportunities identified to date into relevant business processes, including (but not limited to) ERM, capital expenditures and strategic planning.

ii) Case study of how the described process is applied to physical risks and/or opportunities:

(Situation) CP's diverse rail network includes bridges, track, structures and advanced communications equipment, which are vulnerable to damage from climate-related events.

(Task) Regular and timely investment in strategic network and infrastructure hardening improvements is critical to maintaining robust and resilient rail operations.

(Action) By using scenario analysis, CP evaluated how climate change could amplify network resiliency risks at critical points along our right of way. Given the increased likelihood and ongoing impacts of flooding across portions of our network, CP is improving rail corridors, raising track and adding rip-rap stones to mitigate water erosion and flood damage in higher-risk areas. CP has made portions of our network more resilient to climate-related impacts through these and other infrastructure-hardening efforts. Typically, CP spends more than C$1B annually in capital upgrades to the network, with the majority going to resiliency projects. In 2020, we invested over C$1B to renew track and roadway assets (namely rail, ties, ballast, signals and bridges) to ensure system reliability.

(Result) These continual, impact-focused investments ensure that CP can offer efficient services to our customers and avoid costly delays, disruptions or damage to our equipment. For example, CP completed a 2-year bridge replacement project in 2020 including 640 feet of new bridge spans over the Maquoketa River. CP spent C$7.6M to replace the bridge and raise the track 2.1 feet to accommodate increased variability in stream flow and create future resiliency. CP's Engineering team replaced ageing timber structures with robust steel and concrete piers to protect against future flood events.

iii) Case study of how the described process is applied to transitional risks and/or opportunities:

(Situation) As a fuel-intensive business, CP is at risk of exposure to higher fuel prices driven by market interruptions or regulations such as carbon pricing. Using climate-related scenario analysis, CP evaluated how higher carbon prices under the IEA Sustainable Development Scenario (SDS) might amplify fuel costs moving forward.

(Task) Our financial planning focuses on driving improvements in operational performance and annual fuel efficiency to mitigate transition risks around fuel costs.

(Action) Financial planning initiatives, including investments in locomotive renewal programs and new locomotive equipment, support a reduction in annual operating costs through resource and fuel efficiency gains. As part of our continuing risk management process and to support fuel efficiency objectives, CP has made significant investments in a multi-year locomotive and grain car fleet renewal program. In 2020, we invested C$126M in upgrading CP's existing locomotive fleet, and C$127M in rail cars and containers to replace depleted assets, including the acquisition of covered hopper cars for grain transportation. Investments to our rolling stock (including locomotives, rail cars and containers) include technology upgrades, advanced diesel engines, enhanced cooling systems and improved traction systems. The locomotive units are equipped with Trip Optimizer (TO) and Distributed Power systems, which are both Environmental Protection Agency -certified fuel/emissions reduction technologies.

(Result) These investments have helped CP continue to deliver efficient and high-quality service while maintaining a strong operating ratio (calculated as operating expenses divided by revenues), thus making CP more resilient to risks related to increasing fuel costs.

C2.2A

Which risk types are considered in your organization's climate-related risk assessments?

CURRENT REGULATION

Relevance & inclusion

Relevant, always included

Please explain

The railway sector is subject to climate-related regulations that directly influence our operations and customers. Climate-related regulations specific to rail include locomotive emissions standards, fuel standards, carbon levies, taxes and cap and trade programs. Therefore, as part of CP's ERM processes, we periodically evaluate regulatory systems to ensure that we implement appropriate actions to mitigate regulatory risks or take advantage of potential business opportunities.

Government bodies at the provincial and federal level are imposing carbon taxation systems and cap and trade market mechanisms in the Canadian jurisdictions in which CP operates. Specific examples of current regulations that may pose a risk to our business include British Columbia's carbon tax and Canada's federal carbon pollution pricing program. As a fuel-intensive business, an increase in carbon pricing directly impacts operating costs, which can impact the price of our services. If the cost of service becomes too high, it could lead to losses in revenue that might affect our competitive advantage over alternative modes of transport.

Carbon pricing was reviewed as part of CP's climate-related scenario analysis. In this process, carbon costs were evaluated based on CP's fuel purchases (in both Canada and the U.S.) under several existing regulations and alternative carbon price levels. In addition, we stress-tested our business practices against carbon pricing risk by calculating potential cost reductions associated with reducing our emissions along various trajectories, a process that supported establishing CP's science-based targets in 2021.

EMERGING REGULATION

Relevance & inclusion

Relevant, always included

Please explain

The railway sector, rail customers, transportation competitors and suppliers are all subject to emerging regulations that impact the industry. As a North American Class 1 freight rail operator, new regulations on locomotive technologies, renewable fuel requirements, low carbon fuel standards, and carbon pricing systems could significantly impact CP's operating costs. Implementing measures to comply with emerging regulations at CP and our suppliers can result in additional surcharges, increased costs of the materials we purchase to support our operations or other added costs that could ultimately impact our customers.

Canada's Clean Fuel Standard is an example of an emerging regulatory risk to CP. In June 2019, Environment and Climate Change Canada (ECCC) proposed a regulatory framework to support the implementation of a nationwide clean fuel standard to reduce Canada's GHG emissions through the increased use of lower-carbon fuels, energy sources and technologies. In December 2020, ECCC amended the proposed Clean Fuel Standard to target only liquid fossil fuels (including gasoline, diesel and oil). Originally, the Clean Fuel Standard was intended to apply to liquid, gaseous and solid fuels. Final regulations are expected to be finalized at the end of 2021, with rules impacting liquid fuel users to come into force in December 2022. As a diesel fuel-intensive business, changes to fuel blending requirements are expected to raise operating costs, which in turn may impact the price of freight services for our customers ultimately impacting CP's freight revenue. Therefore, CP's environmental risk team closely monitors developments surrounding the Clean Fuel Standard regulation to incorporate changes into CP's business strategy and financial planning.

TECHNOLOGY

Relevance & inclusion

Relevant, always included

Please explain

Technology advancements improving fuel efficiency and energy management systems represent both a significant opportunity and risk for the rail sector. Shipping goods by rail is currently the most fuel-efficient method of transporting freight long distances over land. Loss of this competitive advantage due to significant technological advancements impacting other modes of transport, or a lack of similar technological improvements available to the rail sector, could ultimately impact CP's operations, financial condition and liquidity.

Other modes of freight transport deploying technology that enables fuel efficiency performance equivalent or superior to freight rail (e.g. electrification of heavy haul trucking) is a potential technology risk faced by CP. By incorporating technological advancements in our risk and opportunity assessments, CP has identified opportunities to leverage technology to increase shipping capacity while simultaneously improving fuel efficiency and reducing GHG emissions. For example, CP is implementing an innovative 8,500-foot-long high-efficiency product (HEP) train model to provide efficient and superior service for our grain customers. To support this transition, CP is upgrading our grain car fleet by purchasing 5,900 new high-capacity grain hopper cars by 2022 as part of a C$500M multi-year investment. To date, there are 3,746 high-capacity grain cars in service across CP's network. The HEP train model supported by high-capacity grain cars enables CP to transport 44 percent more grain per unit train, requiring fewer train starts and using less fuel to move customers' grain products to market. These capacity improvements have allowed CP to move more Canadian grain products during the 2020 calendar year than any year in our history.

LEGAL

Relevance & inclusion

Relevant, always included

Please explain

By the nature of our operations, CP is exposed to potential regulatory actions, litigation and other claims, including environmental liability, freight claims and property damage claims. Any material changes to regulation, litigation trends, a substantial rail incident or series of incidents involving freight loss, property damage, personal injury, environmental liability or other significant matters could have a material adverse effect on CP's operations, financial position and liquidity.

We regularly review legal decisions and emerging regulations on a variety of climate-related topics, including carbon pricing, GHG emissions reporting, renewable fuel standards and environmental compliance to identify potential impacts to the organization.

CP is subject to a wide variety of regularly changing GHG emissions reporting, renewable fuel standards and carbon pricing regulations across our network. All of these programs are based on unique regulatory frameworks that present potential concerns for non-compliance related to appropriate emissions reporting, management of emissions allowances and acquisition/availability of required carbon allowances or renewable fuel credits. Non-compliance with such regulatory programs due to any of the aforementioned examples could pose legal risks to CP.

In this evolving regulatory and litigation landscape, CP includes legal and regulatory considerations in our climate-related risk assessments to ensure that we are aware of and take into account potential legal claims and regulatory compliance requirements to minimize CP's exposure to material litigation or fines. One example of this is how CP monitors carbon pricing programs to ensure that shippers are bearing the appropriate costs and risks associated with the transportation of their goods.

Another example of legal risks associated with climate change is that extreme weather events caused by climate change can affect rail operations and potentially lead to increased rail incidents, and thus potentially result in significant regulatory actions or claims for injuries, damage to property or natural resources, and environmental sanctions. Being aware of these legal risks allows CP to better mitigate them.

MARKET

Relevance & inclusion

Relevant, always included

Please explain

As a transportation service provider, CP is particularly vulnerable to downstream market changes over which the organization does not necessarily have control. Our customers are affected by climate-related issues such as increased periods of flooding that impact agricultural production or regulations of fossil fuels that could shift consumer demand for petroleum products in certain jurisdictions. A decline or disruption in domestic, cross-border or global economic conditions that affect the supply or demand for the commodities CP transports may decrease freight volumes and result in a material adverse effect on financial or operating performance and liquidity.

Carbon pricing structures and other climate policies can impact current and potential customer demand for commodities, including thermal coal, renewable fuels, crude oil and other petroleum products. For example, transportation of coal, crude oil and petroleum products accounted for 19 percent, or C$1.432B, of CP's freight revenues in 2020. Therefore, shifting patterns in demand and consumption based on changing consumer preferences or more stringent emissions requirements targeting CP's customers could pose substantial risks to our business. These factors can also create new opportunities for CP, such as increased transportation of renewable fuels.

REPUTATION

Relevance & inclusion

Relevant, always included

Please explain

The transportation sector is a major source of greenhouse gas (GHG) emissions in North America, accounting for 29 percent of Canadian and U.S. emissions in 2019. However, rail transport represents only 2.3 percent of GHG emissions from the U.S. and Canada transportation sectors. Railroads are currently the most efficient way to move freight long distances over land. Given evolving consumer preferences for reducing GHG emissions, CP is well-positioned to meet growing interest in low-carbon freight transportation. We continue to mitigate climate-related reputational risks by investing in technology and practices that further reduce the carbon intensity of rail operations and maintain our significant efficiency advantage.

CP provides service to a variety of carbon-intensive industries, including the transport of fossil fuel products such as coal and crude oil. This association has the potential to increasingly pose reputational risks to CP. Coal, crude oil and petroleum products accounted for 19 percent, or about C$1.432B, of CP's freight revenues in 2020. Shifting public perceptions of participants in fossil fuel markets may create a significant adverse reputational risk for CP. The fossil fuel industry has been subject to increasing public resistance and pressure, creating challenges for our customers during the permitting process for construction or expansion of energy product transportation infrastructure.

ACUTE PHYSICAL

Relevance & inclusion

Relevant, always included

Please explain

As a transcontinental railway Company, CP's rail network is exposed to severe weather conditions and natural disasters such as floods, fires, avalanches, extreme temperatures and precipitation. These events have the potential to cause business interruptions and adversely affect CP's rail network. Acute physical risks can increase costs, expose liabilities, and decrease revenues, materially affecting operational results, financial condition and liquidity. CP's insurance protecting against loss of business and related consequences from natural occurrences is subject to coverage limitations, depending on the nature of the risk insured. Insurance coverage may be insufficient for all damages and may not continue to be available at commercially reasonable rates.

CP regularly assesses physical risks (such as increased flooding) to our rail network to understand potential operational and financial impacts over time. For example, sections of CP's right of way south of Chillicothe, Missouri, is subjected to increasing flooding risks due to significant upstream watershed changes. In response to changing physical risks to our rail infrastructure at this location, we raised approximately eight miles of track by three feet at an estimated cost of C$14.8M between 2013 and 2021. This work has been critical to assuring that our trains remain operational and on schedule during future flood events. As a result of these significant efforts, trains were able to continue to operate on schedule during a springtime flood event in 2021. Prior to making these upgrades, a flood event of similar size would have restricted operations along this part of the network.

CHRONIC PHYSICAL

Relevance & inclusion

Relevant, always included

Please explain

Chronic and gradual changes in global weather patterns have the potential to significantly impact CP's rail network, our customers and the commodities we transport. CP's operations are exposed to fluctuating temperatures and precipitation, which may cause costly business interruptions or damage our rail network, infrastructure or equipment. Chronic climate changes that lead to increased frequency or variability of these impacts could also lead to reputational and market risks should freight rail in North America become perceived as less reliable or more incident-prone due to climate-driven disruption. Additionally, chronic physical climate impacts have the potential to significantly alter the supply and demand for our customers' goods (such as grains, fertilizers and other products) which could create major changes and risks to our business.

CP transports large volumes of crops across North America and to export markets. Variable climate conditions, changing crop varieties and shifting consumer demand have impacted the predictability of annual crop yields within the growing regions serviced by CP. Increasing variability in crop yields can result in an unexpected change in revenue or the ability of CP to respond to demand. Together, grain, potash, fertilizers and sulphur products comprised 35 percent of CP's freight revenues in 2020, illustrating that less predictable yields as a result of chronic climate changes have the potential to significantly impact our business.

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

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

Acute physical

Increased severity and frequency of extreme weather events such as cyclones and floods

Primary potential financial impact

Decreased revenues due to reduced production capacity

Company-specific description

As a transcontinental railway company, CP is exposed to a wide array of periodic severe weather conditions and natural disasters such as floods, fires, avalanches, extreme temperatures and precipitation, which may cause business interruptions and adversely affect CP's rail network. This can increase costs and liabilities, and decrease revenues, which may materially affect operational results, financial condition and liquidity. In particular, changes in precipitation patterns and the frequency of large stormwater runoff events often affect railway operations. These events can happen throughout the network but are primarily a concern on floodplains or in areas vulnerable to snow avalanches and landslides. Two areas of CP's rail network at significant risk of precipitation-related events are segments of track through the Rocky Mountain regions of Alberta and British Columbia (which include CP's Cascade, Columbia, Nelson, Cranbrook, Windermere, and Fording River subdivisions) and along the Mississippi River in the U.S. Midwest (including CP's Davenport, Nitrin, Marquette, and Tomah subdivisions). Combined these subdivisions account for approximately 1,546 track miles or 12 percent of CP's main track network. As climate change is expected to amplify, CP continues to focus on improving planning and mitigating measures to harden infrastructure in areas with historical risks.

In 2019, CP experienced significant severe weather challenges related to avalanches which resulted in several service disruptions in the Western Region of our network. Additionally, Davenport, Iowa experienced major flooding from the Mississippi River, impacting rail operations in this location. In response, CP raised approximately three miles of track by three feet to keep the trains operational during flooding, at a cost of $11M.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

25,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

In 2013, large flooding events throughout Western Canada resulted in a decline in revenue of C$25M as a result of difficult operating conditions and network outrages. The C$25M loss was the combined result of a decrease in

freight revenue from CP's intermodal, bulk and merchandise lines of business experienced during the flood event. Reflecting on the financial impact of past flood events as an indicator of anticipated costs for future events (without adaptive measures to manage this risk), it is clear that major flooding-related operations disruptions can significantly affect CP revenues. CP utilizes C$25M as an estimate of the monetary impact of similar magnitude flood events. Impacts from these types of events are highly variable based on the severity and length of the event and network impact. The financial impact figure of C$25M represents the potential costs from flooding events in just one region. This figure is not representative of total annual costs but instead provides an estimate of the potential impact of future similar localized flood events. Initiatives to mitigate the effects of these costs are overseen by CP's Crisis Preparedness and Business Continuity team.

Cost of response to risk

1,136,000,000

Description of response and explanation of cost calculation

Improvements to infrastructure design and emergency preparedness planning are used to mitigate potential risks posed by weather events. Mitigation measures include seasonal flood plans, winter operating plans, an avalanche risk management program and a slope stability monitoring system in higher risk areas. CP's crisis preparedness and business continuity team reviews the probability and location of affected areas as the flooding season approaches. As part of CP's flood preparedness process, local response resources are mobilized to increase track and structure inspection frequencies, protect infrastructure assets and move sensitive equipment out of flood-prone areas ahead of cresting water bodies.

(Situation) CP's rail network and the physical infrastructure required to operate its freight transport business traverses terrain exposed to severe weather conditions.

(Task) In CP's scenario analysis process, weather- and climate-related changes across our network are assessed under multiple climate scenarios and time horizons.

(Action) Scenario analysis has highlighted that climate-related risks to rail operations are likely to increase. CP regularly reviews available methods to mitigate this risk through active monitoring, infrastructure hardening and insurance programs. For example, Davenport, Iowa experienced major flooding from the Mississippi River in 2019. In response, CP raised approximately three miles of track by three feet to keep trains operational during flooding, costing approximately C$11M. In 2020, CP continued to work with the City of Davenport to reconstruct railroad crossings and install permanent roadways to ensure that tracks, roadways and pedestrian crossings are resilient to future flooding in this area.

(Result) These strategies ensure we are able to operate our network in the face of emerging climate-related risks. Upgrading rail infrastructure is the largest cost associated with mitigating physical risks. Additional costs include regular inspections and upgrades to more than 3,000 bridges across the CP network. CP spends more than C$1B annually to upgrade our network and harden infrastructure assets. A total of more than C$1.136B was invested in mitigating physical risks to the Company and improving network resiliency in 2020. These projects included C$1.008B in the renewal of depleted track and roadway assets, namely rail, cross ties, ballast, signals and bridges and C$128M in additional network improvements and growth initiatives.

Comment

IDENTIFIER

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Market

Uncertainty in market signals

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

CP's business is based on transporting a wide variety of commodities and products from suppliers to the marketplace. A number of the sectors we serve have the potential to be significantly impacted by climate-related transitional risks, including increased regulation, technology changes or shifts in consumer preference. CP's coal line of business includes both thermal and metallurgical coal materials. Our energy, chemicals and plastics line of business includes crude oil and petroleum products. Petroleum products transported by CP consist of commodities such as liquefied petroleum gas, fuel oil, asphalt, gasoline, condensate (diluent) and lubricant oils. CP transports energy commodities supporting refinery and processing locations, as well as end-users across North America and global markets.

Shifting consumer demand to lower-carbon products and increased climate-focused regulations, such as carbon pricing and fuel regulations, could initiate a broad transition in the global energy sector. A comprehensive transition in the energy sector could significantly impact the markets of CP's energy customers or lead to market differentiation through geographic variation in policies and demand trends. A subset of CP's business lines could be materially affected by such a transition, including the demand for coal, crude oil and petroleum products. Coal, crude oil and petroleum products made up 19 percent or C$1.432B of CP's freight revenues in 2020. Potential future changes and instability in these markets represent a significant transition risk to these business lines at CP.

Time horizon

Long-term

Likelihood

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)

541,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

CP tracks the performance of our coal, crude oil and petroleum products business lines, which are subject to potential risks associated with shifting consumer preferences towards lower carbon-intensive energy products. These transitional risks are particularly pronounced following a 2 degrees Celsius climate change scenario (a 2DS scenario) developed by the IEA Sustainability Development Scenario (SDS). Under this scenario, demand for all three business lines could decrease significantly over the medium and long term.

- Coal: In 2020, coal freight revenue was C$566M. About 90% of this revenue is metallurgical coal and 10% is thermal coal. Under the SDS projections, by 2040, annual freight revenue from coal (combined metallurgical and thermal) may decrease by about 33% or about $187M by 2040 compared to 2020 levels.
- Crude oil: In 2020, freight revenue from crude oil was C$317M. Under the SDS, annual freight revenue from crude oil decrease by about 60% or about C$190M by 2040 compared to 2020 levels.
- Petroleum products: In 2020, freight revenue from petroleum products was C$513M. Under SDS, annual freight revenue from petroleum products may decline by 32% or about C$164M by 2040 compared to 2020 levels.

Together, freight revenue from transporting the above fossil fuel products could decrease by C$541M (C$187M + C$190M + C$164M = C$541M) on an annual basis.

The C$541M decrease in freight revenue calculated above is considered a conservative estimate. This does not include other potential risks such as potential revenue losses due to competition from alternative modes of transportation or freight rail's exposure to increase fuel-related costs in the 2DS scenario.

Cost of response to risk

118,189,000

Description of response and explanation of cost calculation

CP's business strategy includes forecasting and managing against fluctuating market conditions associated with climate-related transitional risks and incorporating them into our existing ERM process.

(Situation) With the fossil fuels market being highly volatile and dependent on several moving factors, CP's demand for crude oil shipments by rail can fluctuate significantly based on global oil demand, oil prices, production rates and pipeline capacity.

(Task) While some market changes are unavoidable, a crucial part of CP's business strategy requires key investments to realize opportunities and mitigate risks.

(Action) CP is developing rail capacity and logistics services to support innovative petroleum product transloading facilities such as the Diluent Recovery Units (DRU) under development in Alberta, Canada. The DRU process allows energy producers to remove highly flammable diluent materials from crude oil before transport by rail tank car. Removal of this material significantly reduces flammability hazards associated with transporting crude oil by rail, improving public safety. Additionally, removal allows for a larger volume of product to ship in each tank car, reducing transportation costs and GHG emissions compared to traditional loads of diluted crude oil products. Increasing rail capacity and logistics services to support similar facilities promotes the future sustainability of CP's crude oil business, mitigates transportation safety risks and improves competitiveness with alternative forms of transport, including pipelines.

(Result) To support the DRU project, CP has invested in infrastructure upgrades to increase network capacity to accommodate additional freight volume. Improvements starting in 2016 have included $4.013M to extend our Ottumwa rail yard in Iowa, new rail sidings in Metiskow, Alberta ($7.782M) and Fredensthal, Manitoba, ($8.515M), and investment of $97.879M to renew track ballast to accommodate increased rail capacity. The reported $118.189M figure was derived from the following: $4.013M (Ottumwa yard extension) + $7.782M (Metiskow siding) + $8.515M (Fredensthal siding) + $97.879M (Ballast). These investments help position CP to maintain the crude oil market share and capture service opportunities that may arise, such as increasing demand for rail transport due to recent regulatory and legal setbacks experienced by North American pipeline operators in 2020 and 2021.

Comment

IDENTIFIER

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation

Carbon pricing mechanisms

Primary potential financial impact

Increased direct costs

Company-specific description

As a fuel-intensive industry, the freight rail sector is exposed to both emerging and escalating carbon pricing regulations. Carbon pricing programs can significantly increase direct costs related to fuel purchases and indirect expenses related to purchased goods, materials, and electricity required to operate our business. Approximately 75 percent of CP's Scope 1 and Scope 2 GHG emissions are generated through our operations in Canada and are impacted by carbon pricing mechanisms.

CP is regulated under multiple carbon taxation systems and cap and trade market mechanisms in the Canadian provinces in which we operate. Most provincial programs align with Canada's Greenhouse Gas Pollution Pricing Act, which has established a minimum carbon price set to escalate annually until reaching C$50 per tonne of CO_2 equivalent (tCO_2e) in 2022. We regularly monitor all carbon pricing systems and evaluate our exposure to this transitional risk. In most provinces, the amount collected by our suppliers is based on the current regulatory carbon pricing rates multiplied by the total volume of fuel purchased.

Through our scenario analysis, CP identified that changing consumer preferences and mounting public pressure could inform political policies to incent a rapid transition to a low carbon economy for North America. Should this occur, it is likely that carbon pricing rates could escalate further, and additional jurisdictions, including the U.S., may adopt carbon pricing programs in alignment with Canada's national program. A 2020 report from ECCC stated that the Canadian government has proposed to increase the carbon price by C$15 a year from C$50 in 2023 to C$170 by 2030. Such an increase in carbon pricing rates and exposure across our operations could pose further risks to CP's business.

CP plans to establish a Carbon Reduction Task Force to lead the internal focus on the decarbonization of our operations. CP's industry-leading engineers and operations experts will evaluate potential levers that could reduce GHG emissions. Levers may involve factors such as internal carbon pricing, alternative fuels, renewable energy sources (such as on-site solar power, green power purchasing), use of electric vehicles and equipment, network modifications and alternative propulsion for locomotives. These actions are crucial to reducing our exposure to increasing carbon pricing mechanisms.

Time horizon

Long-term

Likelihood

Unlikely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

331,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

CP used the SDS from the IEA to forecast potential costs from carbon pricing of up to USD$140 per ton of CO_2e by 2040 in both Canada and the U.S. Under this scenario, assuming an annual decrease in CP's GHG emissions of 2.1% based on a science-based target trajectory, CP could be exposed to a USD$140 per ton CO_2e carbon price by 2040 on our potential Scope 1 emissions of 2M MT CO_2e and Scope 2 emissions of 31,000 MT CO_2e. Therefore, after converting to CAD, CP's costs from carbon pricing, both directly from fuel consumption and indirectly

from purchased electricity, could total C$378M, which would be C$331M higher annually than under current prices (i.e., total 2019 baseline levels estimated at C$47M). This estimation makes several high-level assumptions and is not meant to indicate a forecast of true costs to CP but rather presents the range of potential financial impacts to the company.

Cost of response to risk

765,800,000

Description of response and explanation of cost calculation

Through our ERM process, CP assesses changing carbon pricing systems across all Canadian provinces in which we operate, as well as federal programs to ensure CP can either mitigate regulatory risks or take advantage of business opportunities. Expanded geographical coverage of carbon pricing systems and increased price per ton of GHGs emitted pose a risk to CP. Improving the energy efficiency of CP's operations and increasing the amount of energy that comes from renewable sources helps CP minimize exposure to carbon pricing and other regulatory costs. Therefore, we continually monitor and assess new technologies or operational efficiency investments that could reduce emissions. To lower CP's operational GHG emissions footprint and mitigate this risk, over the past few years CP engaged in five emissions reduction initiatives, including: locomotive modernization and retrofitting (roughly C$235M in total); the implementation of Trip Optimizer (TO) technology (~C$12.5M); efficiency improvements in intermodal processes (~ C$9M); purchasing more efficient grain hopper cars (C$500M); and the installation of a solar farm at our headquarters (~C$9.3M). Together, these investments will require C$765.8M (C$235M + C$12.5M + C$9M + C$500M + C$9.3M= C$765.8M).

The following example highlights one of the projects reducing the risk of carbon pricing at CP.

(Situation) As a company with landholdings across our rail network, CP continually evaluates opportunities to utilize land in ways that add value to CP's business and reduce CP's environmental footprint.

(Task) Generating renewable energy presents an opportunity to improve operational efficiency, demonstrate climate action and lower CP's exposure to carbon tax programs.

(Action) In 2020, CP initiated the installation of a solar farm at its Calgary headquarters. The facility spans approximately five hectares, providing covered parking for up to 500 employee vehicles and incorporates four electric car charging stations and a solar garden. This innovative project will enable our corporate headquarters building to run on renewable electricity.

(Result) Completed in March 2021, the solar project will generate up to five megawatts of electricity while avoiding an estimated 2,600 metric tonnes of carbon emissions a year. The project has the potential to reduce CP's total scope 2 GHG emissions footprint by over six percent.

Comment

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

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

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

There is increasing demand in North America to ship goods and materials by rail, particularly for intermodal container shipments. As demand for shipping grows, CP's current and prospective customers are increasingly looking for opportunities to reduce the carbon footprint associated with their supply chains, including the transportation of materials and products. Canada's freight rail sector accounts for just 1 percent of national GHG emissions while transporting 70 percent of all intercity freight. According to an independent study by the Federal Railroad Administration (FRA), moving freight by rail is on average three to four times more efficient than transport by highway truck, with approximately 75 percent fewer GHG emissions. As customer demand continues to increase for low-carbon services, the inherent carbon intensity advantage of freight by rail over other modes of transportation represents a significant opportunity for CP to generate additional revenue. This opportunity is anticipated to be most pronounced for CP's intermodal services, where products are readily transitioned from highway truck transport to freight rail service. Through scenario analysis, CP considered multiple energy transition pathways developed by the IEA to understand potential impacts on the transport sector. The Base Scenario, grounded on existing and planned policies, forecasts a significant increase in North American freight rail activities. A High Rail Scenario assumes increased GHG policy effort and substantial investment in rail infrastructure. In this scenario, freight rail services replace significant demand from alternative modes such as road freight transport. Following the IEA's projections for future growth in North American freight rail demand (under a high rail scenario), CP's total freight revenues could increase from $7.541B in 2020 to nearly $9.7B in 2030. This is not a projection of CP's anticipated freight revenue position in 2030 but rather an illustration of the potential opportunity should the future align with the IEA high rail scenario. To take advantage of this opportunity, CP has invested over C$250M in our rolling stock in 2020 and is currently in the midst of a multi-year Locomotive Modernization Program, which, when complete, will result in the upgrade of over 300 company locomotives.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

2,800,000,000

Potential financial impact figure – maximum (currency)
3,700,000,000

Explanation of financial impact figure
In 2020, CP's freight revenues were C$7.541B. Using scenario analysis, we projected the increases in freight rail under the Base Scenario, in which North American freight rail growth could increase at a 1.8 percent compounding annual growth rate until 2030 and then at a 1.36 percent rate until 2040. Annual freight revenues would then reach C$10.32B (C$7.541B*(1+0.018)^10 = C$9.01B; C$9.01B*(1+0.0136)^10 = C$10.32B) by 2040, which represents an increase in annual freight revenues of C$2.8B above current levels by 2040 (C$10.32B is about C$2.8B greater than C$7.541B). Under the more ambitious High Rail Scenario, North American freight rail could grow 2.33 percent annually until 2030 and then by 1.69 percent until 2040. Annual freight revenues would then reach C$11.23B (C$7.541B*(1+0.0233)^10 = C$9.49B; C$9.49B*(1+0.0169)^10 = C$11.23B) by 2040, which is an increase of C$3.7B above current levels (C$11.23B is about C$3.7B greater than C$7.541B). These calculations are intended to illustrate the potential for business growth under a scenario with ambitious climate action. The values presented here do not provide a projection of future revenue at CP.

Cost to realize opportunity
253,000,000

Strategy to realize opportunity and explanation of cost calculation
CP's continued investment in increased efficiency is the cost to realize the opportunity associated with low-carbon freight transport. In 2020, CP invested C$126M in upgrading the existing locomotive fleet, and C$127M in rail cars and containers for renewal of depleted assets. Together, these investments made up C$253M spent in 2020 on rolling stock investments, which encompass locomotives, rail cars and containers, to continue to establish CP as a leader in delivering lower-carbon, and more efficient services. This reflects a conservative estimate of the cost to maximize CP's operational efficiency as a pillar of our business strategy and financial planning. The following example highlights how CP is making significant investments in assets and technology to improve customer access and product offerings.

(Situation) CP is continually evaluating opportunities to improve customer service while supporting objectives to reduce supply chain emissions.

(Task) Operating the locomotive fleet accounts for more than 94 percent of the fuel needed to run our business. Fuel purchases represent a substantial cost to the company and are a significant source of GHG emissions. By focusing on fuel efficiency improvements and locomotive upgrades to reduce operating costs and GHG emissions, CP can offer customers a cost-effective, low-carbon emitting form of freight transportation. Low carbon freight transportation by rail can have a material impact on GHG emissions for our clients and the North American supply chain.

(Action) CP is currently undertaking a multi-year Locomotive Modernization program. Through this initiative, the company plans to upgrade and retrofit 32 six-axle, high-horsepower locomotives extending the useful life of this equipment by 20 years. Among other key efficiency improvements, all modernized locomotives will be equipped with EPA-certified fuel and emissions reduction technologies.

(Result) By the end of 2020, more than 46.4 percent of CP's active linehaul locomotive fleet will have undergone refurbishment through the Locomotive Modernization program. CP aims to upgrade an additional 30 locomotives in 2021.

Comment

IDENTIFIER

Opp2

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Markets

Primary climate-related opportunity driver

Access to new markets

Primary potential financial impact

Increased revenues through access to new and emerging markets

Company-specific description

CP transports several energy-related commodities that support the transition to renewable energy, including biofuels. In 2020, CP's revenue from transporting biofuels was C$256M, an increase from 2019 and 2018. Increased regulatory pressure and customer demand are expected to support market growth for biofuels. This represents an opportunity for CP's business growth. For example, the Canadian government, Manitoba, British Columbia and Ontario have proposed changes to regulatory fuel standards expected to increase market demand for ethanol, biodiesel, renewable diesel and other renewable products for fuel blending operations to meet regulatory limits. Specific to ethanol, in 2020, Ontario began mandating that fuel suppliers maintain an annual average of 10 percent renewable content in gasoline blends. This change in renewable fuel blending standards, up from a 5 percent minimum previously, is expected to double transportation demand for ethanol products in Ontario. An additional example of new market opportunities relates to the development of renewable energy production in Alberta, including wind energy. CP has been a critical partner in supporting this transition and is currently engaged in several multi-year projects to transport 1,300 megawatts of wind turbine materials into the Alberta marketplace. As demand for wind energy increases in North America, CP's ability to carry and handle the large equipment necessary for wind energy production could support increased revenue from wind-related transport in the short-, medium- and long-term time horizons.

Through scenario analysis and CP's new Climate Strategy, CP has started to evaluate emerging technologies, such as hydrogen-powered locomotives and renewable energy to maximize opportunities in the expanding renewable fuel market.

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

236,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The increased requirement for renewable fuel materials to meet emerging regulatory requirements is expected to boost demand for freight rail services to transport biofuel products. In 2020, CP generated C$256M from biofuel, a significant increase from C$228M in 2019 and C$195M in 2018.

CP included the IEA's 2-degree-aligned SDS scenario as part of our scenario analysis. Under this scenario, annual freight revenue from biofuels could approach C$492M by 2040, an increase of C$236M above current levels. This figure was calculated by applying the IEA's projected growth rate in North American demand for bioenergy, assuming a linear growth rate from 138 million tons of oil equivalent (Mtoe) in 2019 to 278 Mtoe in 2040. An increase to 278 Mtoe represents a 192% growth in demand compared to 145 Mtoe in 2020, based on a linear growth rate between 2019 and 2020. Applying the same assumed level of growth to CP's 2020 biofuels freight revenue of C$256M, this could result in revenues of C$492M by 2040 (C$256M * 1.92 = C$492M), or C$236M over current levels (C$492M - C$256M). These estimations are intended to demonstrate the potential in business opportunities under a 2-degree-aligned SDS and do not reflect CP's precise revenue projection.

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation
CP's marketing and sales teams work with potential biofuel and other renewable energy customers on a regular basis, and CP has strategically located personnel in key regions and lines of business to continue providing value to customers.

(Situation) As the demand for alternative fuels and energy continues to increase in North America and globally, CP may be well-positioned to support the transportation of new energy products and equipment to growing markets.

(Task) CP leverages our transportation and property assets to provide a critical service to support Alberta's expanding renewable wind energy generation capacity.

(Action) As this land is already owned by CP, there are no significant additional costs associated with realizing these opportunities. However, transporting large wind system components and turbines by rail requires careful planning, shipment modelling, coordination and detailed project management. Due to the size of the wind turbine materials (each turbine blade spans three standard flat deck rail cars during transport), shipping and handling of these materials requires a large land footprint and specialized crane equipment to facilitate windfarm development. To support the transport of wind turbines and related materials, CP has provided wind producers access to land near rail assets for staging cranes and other equipment necessary to load and unload the materials from trains.

(Result) Utilizing available property resources and extensive transportation expertise, CP can support the Alberta wind power generation sector and realize a partnership opportunity that may contribute to increased freight revenue from wind energy moving forward.

Comment
Additionally, CP has a Sales and Marketing Grain & Fertilizers team with four specialists that handle pricing and marketing of all grain and fertilizer products. This includes the handling of various commodities that include biofuels (ethanol and biodiesel), dried distiller's grains (DDGS), corn syrup/starch/sugar/steep water, and miscellaneous feed Ingredients (middlings, screenings, beet pulp, etc.). With DDGS, corn syrup, and starch all being by-products of ethanol production and handled by these specialists, the cost to realize the opportunity is zero. CP's specialists continuously scan the market to evaluate supply and demand, forecast transportation volumes, project revenues and make (and understand) adjustments as needed.

IDENTIFIER
Opp3

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

Opportunity type
Energy source

Primary climate-related opportunity driver
Use of new technologies

Primary potential financial impact
Reduced direct costs

Company-specific description
CP has published its Climate Strategy to align our approach to climate action with leading scientific practices and policy guidance. Through our strategy, we have established a science-based emissions reduction target to guide CP's activities until 2030. CP's locomotive fleet accounts for more than 90 percent of the fuel needed to run our business. While CP will continue to improve locomotive efficiency through fuel efficiency improvements and locomotive upgrades, achieving the ambitious emissions reductions required by our science-based target will require the exploration of new emissions reduction levers. Working towards the 2030 target, CP will focus on existing emissions reduction technologies and market-ready renewable fuels while evaluating the alternative propulsion technologies necessary for longer-term reductions in GHG emissions within the freight rail industry.

Hydrogen fuel cell/battery hybrid propulsion technology is being tested worldwide as a viable alternative fuel for the transportation sector, with particular promise for rail and other long-haul heavy freight transportation systems. Hydrogen technology, if proven successful at scale, has the potential to reduce GHG emissions for railway locomotives, reducing the GHG footprint and offering additional benefits such as reduced operational noise and vibration compared to diesel-electric engines.

CP is working to develop North America's first hydrogen-powered line-haul freight locomotive by retrofitting a diesel-powered locomotive with hydrogen fuel cells; these fuel cells will power the locomotive's electric traction motors. Locomotives are an expensive, long-lived asset, often undergoing several scheduled engine overhauls during decades of use. With over 30,000 diesel-electric locomotives in freight service across North America today, a solution to retrofit the locomotive power plant with a combination of hydrogen fuel cells and battery technologies is critical to reducing the carbon footprint of the freight rail sector. CP is partnering with Ballard Power Systems to employ Ballard fuel cell modules into CP's Hydrogen Locomotive Program. This program is intended to spur innovation, demonstrate leadership and encourage supply chain collaboration to expedite zero-emission fuel cell technology for the freight transportation sector.

Time horizon
Long-term

Likelihood
Virtually certain

Magnitude of impact
High

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

Potential financial impact figure (currency)
599,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure
Using climate-related scenario analysis, CP evaluated how higher carbon prices under the IEA's SDS might amplify fuel costs moving forward. With carbon pricing rising in Canada to potentially C$239/MT GHG by 2050 under this low-carbon scenario, the scenarios show that early investment in decarbonization from electrification (which was used as a proxy for fuel switching technologies, including hydrogen) could deliver significant annual savings. For example, Transport Canada estimates that carbon neutral operations across CP's freight rail network between Vancouver and Montreal could save 1.093 million MT GHG annually and therefore, under an SDS scenario, CP could save over C$261 million annually in carbon costs by 2050, in addition to the C$338 million saved in annual fuel costs, accounting for a combined financial impact of C$599 million (sum of C$338 million and C$261 million).

The analysis does not take into account changes in costs of electricity, diesel or other technological changes that may arise.

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation
CP is working to develop North America's first hydrogen-powered line-haul freight locomotive by retrofitting a diesel-powered locomotive with hydrogen fuel cells and battery technology to power the locomotive's electric traction motors.

(Situation) CP's locomotive operations consume more than 90 percent of the energy needed to run our operations. While CP regularly outperforms industry averages for fuel efficiency, we are committed to further improving the carbon footprint of our locomotives. Hydrogen fuel cells are an emerging technology with the potential to reduce emissions from the difficult to decarbonize heavy haul freight and rail transportation sectors. Once operational, CP will conduct rail service trials and qualification testing to evaluate the technology's readiness for the freight-rail sector.

(Task) On December 18, 2020, CP announced plans to develop North America's first line-haul hydrogen-powered locomotive. CP's Hydrogen Locomotive Program will retrofit a line-haul locomotive with hydrogen fuel cells and battery technology to drive the locomotive's electric traction motors.

(Action) In 2020, CP established a fully functional laboratory to enable end-to-end testing and integration of hydrogen and battery technologies. CP is retrofitting a diesel locomotive with hydrogen fuel cells and battery hybrid propulsion technology using commercially available components. Once operational, CP will conduct rail service trials and qualification testing to evaluate the technology's readiness for the freight-rail sector.

(Result) This project is currently in the technology integration phase. CP recently announced the delivery six 200-kilowatt fuel cell modules to CP in 2021. Upon arrival, CP's project team will coordinate the fuel cell supplier to integrate fuel cell modules into the locomotive.

Under the direction of the Chief Engineer, Railway Technology, costs associated with the development of the hydrogen fuel cell locomotive are largely integrated into existing capital budget of CP's mechanical department. The additional costs associated with this work cannot be publicly disclosed by CP at this time. This project demonstrates CP's commitment to developing the next generation of locomotive – one that produces zero emissions.

Comment

C3. Business strategy

C3.1

Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?

Yes, and we have developed a low-carbon transition plan

C3.1A

Is your organization's low-carbon transition plan a scheduled resolution item at Annual General Meetings (AGMs)?

Yes

Comment

In 2021, CP developed a Climate Strategy to focus the Company's climate actions on innovation, collaboration and thought leadership. The Climate Strategy builds on CP's Climate Statement and outlines our approach to manage potential climate-related impacts across the business. We recognize that a changing climate and related economic impacts can have significant ramifications for our business. To be proactive, we need to understand possible implications, identify market opportunities and build climate mitigation and adaptation investment measures into our planning processes. The Climate Strategy aims to position CP as a leader as the transportation sector transitions to a low-carbon future.

To respond to the risks and opportunities posed by climate change, and to meet CP's decarbonization commitments, the Climate Strategy includes actions across five strategic pillars:

- Understand CP's climate-related risks and opportunities.
- Reduce CP's carbon footprint.
- Respond to physical risks from climate change.
- Integrate climate factors across CP's business.
- Engage with CP's stakeholders.

During the 2021 Annual and Special Meeting of Shareholders, shareholders approved a shareholder proposal regarding climate change at CP. This proposal is also supported by CP management, committing the company to: (i) publish a CP Climate Strategy in 2021, (ii) report annually to shareholders as to the progress of the Climate Strategy and (iii) receive feedback from shareholders in the form of a non-binding, advisory vote on the progress and any changes we may propose to the CP Climate Strategy.

C3.2

Does your organization use climate-related scenario analysis to inform its strategy?

Yes, qualitative and quantitative

C3.2A

Provide details of your organization's use of climate-related scenario analysis.

CLIMATE-RELATED SCENARIOS AND MODELS APPLIED

IEA Sustainable development scenario
EA NPS

Details

CP uses the IEA's Sustainable Development Scenario to help evaluate potential business impacts, which assumes global warming is limited to 2 degrees Celsius due to several regulatory, technological and societal lifestyle changes. This was compared to the IEA baseline scenarios as presented in the Current Policies and New Policies scenarios. Where CP's internal market projections were available, this information was combined with IEA scenario projections to identify potential impacts to the company. Where not available, CP's 2019 market share was used as the baseline from which to model financial impacts of the scenarios.

Where possible, data addressed trends for 2030 and 2050 to identify potential medium- and long-term impacts and illustrate how risks and opportunities might evolve over time. This approach provides CP with insight into various pathways

the U.S. and Canadian economies could follow in the future, providing helpful information for business planning processes.

Scenario analysis results provide insight into how CP's business may be impacted by climate change. The process highlights key financial risks of climate-related issues at varying global warming scenarios while identifying plausible solutions to reduce these risks to CP.

CP's business is exposed to several transition risks, including 1) regulatory risks in particular carbon pricing strategies, 2) market risks such as declining revenue from certain business lines due to shifting demand or other transition or physical risks that impact our customers and 3) technological risks related to competition from alternative modes of transport. Key risks and opportunities from the analysis include:

Policy:

- Carbon Pricing: New or additional carbon pricing could lead to increased costs to CP.
- Fuel Efficiency: CP's inherent efficiency advantage over trucking may be amplified by regulations such as carbon pricing.

Technology:

- Fuel Switching: Switching railway operations to renewable fuels and/or alternative propulsion (such as hydrogen fuel cells) can reduce fuel and carbon costs.
- Trucking Competition: Technology leading to the decarbonization of highway transport may make it more cost-effective to operate these heavy-duty trucks over long distances, leading to increased competition from trucking.

Markets:

- Coal Markets: Coal was 8% of CP's freight revenue in 2020. CP's revenue may be impacted by a decrease in thermal coal demand and an increase in metallurgical coal demand.
- Energy Markets: Energy, chemicals and plastics were 20% of CP's freight revenue in 2020. Changes in demand for different energy products (petroleum products, crude oil, biofuels and wind generation) may increase or decrease revenues from those sectors.
- Freight Rail Demand: A focus on decarbonizing the broader transport sector may increase demand for lower carbon transport options, expanding freight rail services and increasing revenue.

Case study:

(Situation) The results of scenario analysis provide a useful illustration of how expanding carbon pricing regulations could impact the future costs for locomotive fuels.

(Task) CP assessed the effects of incremental carbon prices across our U.S. and Canadian operations. Financial models allowed project managers to evaluate the impacts of increasing fuel use in the future or potential savings associated with reducing emissions in line with a science-based reduction target (SBT).

(Action) Utilizing carbon price estimates from IEA scenarios (including the SDS) and stated carbon pricing policies from the Government of Canada, CP projected potential annual carbon cost exposures. Carbon cost estimates highlight the value of implementing strategies to reduce GHG emissions. In response to information and other instigating factors, CP has established a well-below 2°C target aligned with current SBT initiative methodology for the transportation sector.

(Result) CP is evaluating a wide variety of emissions reduction levers and emerging practices to meet our new 2030 SBT.

CLIMATE-RELATED SCENARIOS AND MODELS APPLIED

RCP 8.5

Details

CP drew upon publicly available scenarios from the Intergovernmental Panel on Climate Change (IPCC) to model physical risks. The IPCC scenario 8.5 assumes a global temperature increase of 4 degrees Celsius, representing significant physical climate risks, including extreme temperatures, weather events, flooding, and sea-level rise. CP used geographic information system modelling to evaluate several locations across the rail network to understand how physical impacts associated with this climate change scenario could affect railway operations.

Time horizon: Where possible this evaluation included global warming data and trends specific to 2030 and 2050 to understand the potential medium- and long-term impacts.

Results: Scenario analysis results provide insight into how CP's business might be impacted by climate change. The process highlights key financial risks of climate-related issues at varying global warming scenarios while identifying plausible solutions to reduce CP's climate-related risks. Operating a 13,000 mile rail network across North America exposes CP to both acute and chronic physical risks, including:

- Acute physical impacts from exposure to increasing extreme weather and precipitation events could damage CP's rail infrastructure, possibly disrupting rail operations.
- Chronic changes, such as sea-level rise in key coastal locations and changing temperatures, could lead to significant disruptive impacts across CP's network and infrastructure.

Key risks: Increasingly frequent and severe precipitation events pose risks associated with damage to infrastructure and operating delays. These risks are highlighted throughout this CDP response including questions 2.2a and 2.3a.

Alignment with business objectives and strategy: CP's scenario analysis provides an overview of climate-related risks impacting the organization, ultimately focusing on those most material to the business. Material risks that align with the risk categories of CP's ERM process are included in ongoing risk monitoring and oversight processes. The results of this process inform our Climate Strategy and support the resiliency of our business strategy and financial planning, assuring CP remains well-positioned to face a variety of potential climate-related outcomes.

Case study:

(Situation) CP's rail network and the physical infrastructure required to operate its freight transport business traverses vast and remote terrain often exposed to severe weather conditions.

(Task) Through scenario analysis, CP assessed the impacts to our network from weather- and climate-related events under a range of climate scenarios and time horizons.

(Action) To support the resilience of our business, we are aligning our technical expertise and network management systems with leading climate science. Using current climate models under a range of future scenarios, with analysis tailored to CP's business, we have reviewed the potential physical risks of climate change at a strategic level.

(Result) As an outcome of this process, CP has identified shortcomings where new or different data are required to enhance our understanding of the physical risks related to climate change. Granular level information will improve our ability to assess and understand potential risks and opportunities, strengthen data collection tools, monitor for changes and prioritize our mitigation efforts. For example, following a detailed engineering assessment of CP's Turkey River Bridge, the structure was identified to have an elevated exposure to damage from future ice jams and large flood events. In response, CP raised 500 feet of bridge spans and supporting track infrastructure by two feet at the cost of approximately C$8.11M. These protective measures enhance CP's resiliency against future service disruptions and costly infrastructure repairs.

C3.3

Describe where and how climate-related risks and opportunities have influenced your strategy.

PRODUCTS AND SERVICES

Have climate-related risks and opportunities influenced your strategy in this area?

Yes

Description of influence

Efficiency plays a central role in CP's strategy regarding products and services. According to the FRA, railways are the most efficient and low-carbon form of transporting goods and freight long distances over land. As of 2020, a CP train can transport one ton of freight 588 miles on a single gallon of fuel. Our ability to offer customers more efficient, lower-carbon emitting transportation services than fuel-intensive and higher-emitting competitors (such as trucking) represents a significant climate-related opportunity for CP. Using less fuel per ton of freight reduces our exposure to increasing fuel costs, regulatory risk and escalating carbon pricing programs.

(Situation) As a highly fuel-efficient operation, CP is well-positioned to grow our business while meeting customer expectations for lower carbon freight services. CP's business strategy involves improving operational and resource use efficiency to deliver low carbon, less fuel-intensive freight services in the short, medium and long-term time horizons.

(Task) Specifically, CP is working to modernize grain hopper cars, with the aim of bringing this more efficient fleet of rolling stock into use by 2023.

(Action) An example of CP's strategic approach includes the implementation of our 8,500-foot high-efficiency product grain train (HEP train), which improves supply chain capacity, customer service and fuel efficiency. Once implemented, the HEP train will allow CP to carry 40 percent more grain per train, significantly reducing the total number of train starts, fuel consumption and GHG emissions associated with transporting grain to market. To support the HEP train model, CP is purchasing new high-capacity grain hopper cars as part of a C$500M multi-year investment, with a plan to bring a total of 5,900 online by 2023. A total of 3,700 high-capacity train cars are now in service across CP's network.

(Result) The capacity improvements associated with the HEP train logistics model and high-capacity grain cars have enabled CP to transport more Canadian grain products in 2020 than any other year in CP history. In May 2020, CP set a company record for the most grain shipped in a single month at 2.8M metric tons. The model is an example of the central role that efficiency plays in CP's products and services strategy, where significant upfront investment in the short term supports risk mitigation in the medium and long term.

SUPPLY CHAIN AND/OR VALUE CHAIN

Have climate-related risks and opportunities influenced your strategy in this area?

Yes

Description of influence

CP conducted scenario analysis to assess climate-related risks and opportunities related to major customer markets that the company serves. Specifically, CP looked at potential changes in coal and energy markets across multiple International Energy Agency (IEA) climate scenarios, and the impact that changes in CP's downstream value chain could have on the company's financial performance. In 2020, CP's energy, chemicals and plastics (ECP) and coal customers accounted for 20 percent and 8 percent of our freight revenue respectively. The findings of scenario analysis have helped inform our customer engagement strategy and enhanced our understanding of how market specific demand for freight rail transportation may evolve over time. CP's scenario analysis evaluated how climate-related risks and opportunities would impact customer markets in the medium (2030) and long-term (2050).

CP's strategy for managing potential impacts related to markets is to engage our business teams on climate change. While focused on short-term operational performance, CP seeks to understand long-term trends.

(Situation) Climate change can impact the volatility of specific industrial sectors and markets, particularly energy products.

(Task) CP conducted scenario analysis to evaluate and mitigate potential climate-related risks in CP's downstream value chain, including how our customers and the markets they serve could be affected by climate change.

(Action) CP examined energy-related business lines through scenario analysis, including coal, petroleum products, crude oil, biofuels and wind, using multiple IEA climate-related projections of future product demand. Under a 2-degree-aligned future scenario (SDS), it was identified that CP could simultaneously experience a decrease in revenue from petroleum products, crude oil and coal, and a revenue increase from the transportation of biofuels and wind power generation equipment.

(Result) This information influences CP's long-term business strategies and customer engagement practices, including wind energy developers in Alberta or ethanol producers in the U.S. Midwest.

INVESTMENT IN R&D

Have climate-related risks and opportunities influenced your strategy in this area?

Yes

Description of influence

Monitoring and implementing emerging technology is a key element of CP's business strategy, enabling the delivery of low-carbon services to our customers.

Given the complexity of reducing emissions in the heavy haul transportation sector, next-generation fuels, efficiency technologies and fuel alternatives are needed in the short to medium term. CP is establishing a Carbon Reduction Task Force to progress our Climate Strategy and drive an internal focus on decarbonization across the organization. Through this task force, CP's industry-leading engineers and operations experts will evaluate potential levers, practices and tools to reduce GHG emissions. These efforts provide an opportunity to collaborate with our value chain to build partnerships with technology providers in an emerging marketplace.

(Situation) Hydrogen fuel cell/battery hybrid propulsion technology is being tested as an alternative fuel in the transportation sector, with particular promise for freight rail systems. If proven successful at scale, hydrogen technology can significantly reduce the GHG footprint of railway operations.

(Task) In December 2020, CP announced plans to develop North America's first line-haul hydrogen-powered locomotive. With over 30,000 diesel-electric locomotives in freight service across North America today, such a solution to retrofit the locomotive power plant is critical to reducing the carbon footprint of the freight rail sector.

(Action) CP engineering and mechanical experts are developing this locomotive by retrofitting a diesel-powered locomotive with a combination of hydrogen fuel cells and battery technology to power the locomotive's traction motors. The project will utilize commercially available components with six 200-kilowatt fuel cells to be delivered in 2021.

(Result) CP's program is intended to spur innovation, demonstrate leadership and encourage collaboration to expedite the advancement of zero-emission fuel cell technology for the freight transportation sector. In June 2021, recognizing the potential of this program, the Government of Alberta awarded CP a $15M grant allowing us to install hydrogen production and fueling facilities and expand from one to three hydrogen locomotive conversions. Once fully operational, this program will demonstrate the technical performance of hydrogen-powered locomotives and supporting fueling infrastructure in real-world operations.

OPERATIONS

Have climate-related risks and opportunities influenced your strategy in this area?

Yes

Description of influence

CP plays a critical role in enhancing the sustainability of the North American supply chain. Continued investment in optimizing the rail network, coupled with locomotive fleet improvements, has enabled CP to operate one of the most fuel-efficient freight railways in North America. Climate-related opportunities, such as increasing customer expectations for reliable, efficient, low-carbon transportation services have influenced our operations. CP has long focused on energy-saving initiatives as a core component of its sustainability practices. Since 1990, CP has improved its locomotive fuel efficiency by more than 44 percent through a variety of programs and technology deployments. By engaging with our customers and supply chain to improve operational efficiency, CP is taking action on this climate-related opportunity in the long term. Our focus on operational efficiency also has short term benefits, allowing CP to mitigate increasing fuel costs associated with emerging carbon pricing systems and clean fuel standards.

(Situation) CP consumes a significant volume of diesel fuel as part of our locomotive operations, representing the vast majority of our GHG emissions.

(Task) CP implements strategic investments in our rail network, equipment and locomotive fleet through our annual capital program to improve operational fuel efficiency.

(Action) In 2020, CP upgraded 30 line-haul locomotives through our multi-year locomotive modernization program. Through this initiative, CP has refurbished a total of 386 in-line modernized locomotives, upgraded between 2017-2020, accounting for 46.4 percent of our active fleet. Locomotives upgraded through this program have a direct and positive impact on CP's fuel efficiency and corresponding GHG emissions.

(Result) The fuel efficiency of locomotives that have gone through the modernization program have improved by a minimum of 2.7 percent. The 30 locomotives upgraded in 2020 will account for annual savings of more than 950,000 litres of diesel fuel and 2,810 MT of GHG emissions. Supported by these

investments, CP set a company record fuel efficiency in 2020, consuming 0.942 U.S. gallons of locomotive fuel per 1,000 gross ton-miles, outperforming the Class I railroad sector average by 11.3 percent. CP continues to mitigate climate-related risks by reducing locomotive fuel consumption to improve operational efficiency.

C3.4

Describe where and how climate-related risks and opportunities have influenced your financial planning.

Financial planning elements that have been influenced

Capital expenditures

Description of influence

Operating and maintaining a transcontinental railroad is capital intensive. CP annually allocates significant capital funds to enhance the resiliency and efficiency of our locomotive fleet, rolling stock and rail network. Executing CP's Climate Strategy will require deploying emerging data systems, advanced technologies and next-generation renewable fuels to mitigate GHG emissions. Successfully implementing our Climate Strategy will require an innovative approach to business planning when deploying limited financial and people resources.

Capital expenditures: The process for allocating capital resources is a cornerstone of CP's financial planning cycles. How the company allocates capital resources directly influences business performance and operating ratio (as measured by dividing total operating expenses by total revenues). Capital planning decisions are increasingly influenced by climate-related risks and opportunities, including carbon pricing and evolving customer preference for low-carbon transportation solutions. Continuing to deliver highly efficient and cost-effective transportation services supports a strong operating ratio performance and is a key focus of CP's short-term planning processes. However, due to the long life cycle of locomotives and other capital investments, financial planning in this area also influences medium- to long-term business performance. As a result, CP prioritizes investments in projects with the ability to provide both immediate and long-term operational resource and fuel efficiency benefits.

A key objective of CP's responsible growth model is investing in projects that directly benefit operational efficiency, including fuel and energy savings opportunities. Our financial planning process is designed to support capital expenditures to meet this objective. In 2020, CP invested C$253M to renew depleted assets, encompassing C$126M in locomotive upgrades and C$127M in rail car and container improvements, including the acquisition of covered hoppers for grain transportation.

(Situation) CP consumes a significant volume of diesel fuel as part of our locomotive operations representing the vast majority of the company's annual GHG emissions.

(Task) CP implements strategic investments in our rail network, equipment and locomotive fleet through our annual capital program to improve the fuel efficiency of our operations.

(Action) In 2020, CP upgraded 30 line-haul locomotives through our multi-year locomotive modernization program. Through this initiative, CP has refurbished a total of 386 in-line locomotives between 2012-2020, accounting for 46.4 percent of our active fleet. Locomotives upgraded through this program have a direct and positive impact on CP's fuel efficiency and corresponding GHG and air pollutant emissions.

(Result) The fuel efficiency of locomotives that have gone through the modernization program improves by a minimum of 2.7 percent. The 30 locomotives upgraded in 2020 will account for annual savings of more than 950,000 litres of diesel fuel and 2,810 metric tonnes of GHG emissions. Supported by these investments, CP set a company record fuel efficiency in 2020, consuming 0.942 U.S. gallons of locomotive fuel per 1,000 gross ton-miles (GTMs), outperforming the Class I railroad sector average by 11.3 percent. CP continues to mitigate climate-related risks by reducing locomotive fuel consumption to improve operational efficiency.

C3.4A

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

C4. Targets and performance

C4.1

Did you have an emissions target that was active in the reporting year?

Intensity target

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
2021

Target coverage
Company-wide

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

Intensity metric
Other, please specify
(grams CO_2e per revenue ton-mile (RTM)

Base year
2019

Intensity figure in base year (metric tons CO_2e per unit of activity)
25.17

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure
79

Target year
2030

Targeted reduction from base year (%)
38.3

Intensity figure in target year (metric tons CO_2e per unit of activity) [auto-calculated]
15.52989

% change anticipated in absolute Scope 1+2 emissions
-26

% change anticipated in absolute Scope 3 emissions
-26

Intensity figure in reporting year (metric tons CO_2e per unit of activity)
24.42

% of target achieved [auto-calculated]
7.7799942117

Target status in reporting year
New

Is this a science-based target?
Yes, and this target has been approved by the Science Based Targets initiative

Target ambition
Well-below 2°C aligned

Please explain (including target coverage)
This intensity-based target commits CP to reduce locomotive well-to-wheel (WTW) GHG emissions per revenue ton-miles (RTMs) by 38.3 percent by 2030, from a 2019 base year. Well-to-wheel emissions included in the target are scope 1 emissions from locomotive fuel (which account for 95 percent of total combined Scope 1 & 2 emissions in 2019) and scope 3, Category 3 emissions from locomotive fuel. The use of RTMs is a critical measure of CP's freight transportation business activity and is consistent with industry practice, aligning with the SBTi Sectorial Decarbonization Approach (SDA) target-setting approach. This target was calculated using the SBTi's SDA Tool for the transport sector.

C4.2

Did you have any other climate-related targets that were active in the reporting year?

Other climate-related target(s)

C4.2B

Provide details of any other climate-related targets, including methane reduction targets.

Target reference number
Oth 1

Year target was set
2021

Target coverage
Business activity

Target type: absolute or intensity
Absolute

Target type: category & Metric (target numerator if reporting an intensity target)
Other, please specify
Non-locomotive emissions (Metric tonnes CO_2e)

Target denominator (intensity targets only)

Base year
2019

Figure or percentage in base year
166,109

Target year
2030

Figure or percentage in target year
120,429

Figure or percentage in reporting year
144,358

% of target achieved [auto-calculated]
47.6160245184

Target status in reporting year
New

Is this target part of an emissions target?
Yes, this is a standalone target covering emissions from CP's non-locomotive operations, which make up just 5% of our overall emissions footprint.

Is this target part of an overarching initiative?
Other, please specify

Yes, this target is part of CP's Climate Strategy and covers emissions related to non-locomotive operations including facility energy use, vehicle and non-locomotive equipment. These account for approximately 5% of CP's Scope 1 and 2 GHG emissions.

Please explain (including target coverage)
This absolute reduction target commits CP to reduce Scope 1 & 2 GHG emissions from non-locomotive operations by 27.5 percent by 2030, from a 2019 base year. This target includes emissions associated with CP buildings and facilities. Although not submitted to the SBTi for validation, this target is based on the same robust methodology and was calculated with the SBTi's Absolute Contraction Approach in line with a Well-below 2C trajectory (WB2C).

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

Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO_2e savings.

	Number of initiatives	Total estimated annual CO_2e savings in metric tonnes CO_2e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	1	2,600
Implemented*	3	83,321
Not to be implemented	0	0

C4.3B

Provide details on the initiatives implemented in the reporting year in the table below.

INITIATIVE CATEGORY & INITIATIVE TYPE

Non-energy industrial process emissions reductions
Other, please specify
Locomotive Retrofit / Modernization

Estimated annual CO_2e savings (metric tonnes CO_2e)
2,810

Scope(s)
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
478,107

Investment required (unit currency – as specified in C0.4)
50,000,000

Payback period
>25 years

Estimated lifetime of the initiative
>30 years

Comment
The locomotive modernization project is part of a multi-year locomotive fleet renewal program at CP. In 2020, CP upgraded 30 locomotives, increasing the total to 386 locomotives retrofitted through this initiative. Locomotive enhancements include technology upgrades, advanced diesel engines and improved cooling and traction control systems. All units were equipped with EPA-certified fuel/emissions reduction technologies and GE TO and Distributed Power systems. Emissions reductions associated with this project were conservatively estimated based on a 2.7 percent improved fuel efficiency guarantee provided by the equipment vendor. CP anticipates that the combined effect of locomotive upgrades coupled with installed fuel-saving technology will result in realized fuel savings beyond 2.7 percent. The estimated annual savings and corresponding payback period reflect the financial impact of projected fuel savings only.

INITIATIVE CATEGORY & INITIATIVE TYPE

Non-energy industrial process emissions reductions
Other, please specify
Process improvement efficiencies

Estimated annual CO_2e savings (metric tonnes CO_2e)

74,972

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

28,151,961

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

0

Payback period

No payback

Estimated lifetime of the initiative

>30 years

Comment

Implementation of process improvements and changes to operating practices associated with CP's precision scheduled railroading operations model has driven a 1.36% improvement in fuel efficiency between 2019 and 2020. Since 2012, CP has successfully operated its precision scheduled railroading (PSR) approach. One of the first Class 1 freight railways to successfully implement this approach, PSR involves constant monitoring and optimization of all railway assets and processes to maximize operational efficiency, improve outcomes for CP's stakeholders and increase safety for employees and communities. To support PSR objectives, CP invests annually in upgrades to its rail network, locomotive and car fleet, improved operational practices and technological improvements. These enhancements unlock operational efficiencies while increasing network capacity, reducing costs and increasing revenue while promoting responsible sustainable growth. Notable factors contributing to improved fuel economy in 2020 include enhanced productivity from running longer, heavier trains, increased network fluidity and velocity and proficient operating plan efficiency. Annual monetary savings are associated with reduced fuel purchases due to the successful process and operational changes.

INITIATIVE CATEGORY & INITIATIVE TYPE

Energy efficiency in production processes
Other, please specify
Energy efficiency in facilities

Estimated annual CO_2e savings (metric tonnes CO_2e)

5,539

Scope(s)

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

1,231,952

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

0

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

In 2020, CP invested in energy efficiency projects at our buildings and yards, including HVAC, lighting, and air compressor upgrades to reduce electricity consumption at several facilities. These upgrades, coupled with the impacts of increased employee telecommuting, led to electricity savings of 10,191 MWh in 2020. The estimated annual savings and corresponding payback period reflect the financial impact of projected electricity savings. There is 0 additional cost for these monetary investments as material upgrades are part of CP's annual facility maintenance and renewal program.

C4.3C

What methods do you use to drive investment in emissions reduction activities?

Method

Financial optimization calculations

Comment

In order to position CP as a leader in the transition to a low-carbon economy and fully execute the Climate Strategy, we recognize that new approaches will be required to deploy capital, operating budgets and people in the most efficient and effective ways possible. CP currently expends significant amounts of capital to maintain and upgrade our locomotive fleet and network, to improve overall efficiency and ensure system reliability. We anticipate that new approaches to deploy these resources will be necessary to assess and utilize the new data systems, technologies and fuels required to mitigate GHG emissions in the coming years.

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?

Yes

C4.5A

Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation

Company-wide

Description of product/Group of products

The shipping of freight by rail remains the most fuel-efficient mode of long distance overland freight transport. Transport of goods and materials by rail allows CP's customers to avoid GHG emissions associated with utilizing truck transport for the same distance.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Comparison of long-term fuel consumption.

% revenue from low carbon product(s) in the reporting year

100

Comment

The transportation sector accounts for the second-highest GHG emissions by economic sector in both Canada and the U.S. (29 percent). Railways move approximately 70 percent of all freight on a tonne-kilometre basis in Canada but only account for 2.3 percent of the GHG emissions from the transportation sector. CP's focus on improvements in locomotive fuel efficiency has allowed us to provide a low-carbon transportation option to our customers. According to the Association of American Railroads (AAR), the movement of freight by rail is on average three to four times more fuel-efficient than truck transport. Despite this inherent efficiency, CP recognizes the importance of continuing to strive for operational improvements to further reduce GHG emissions.

Sources:

https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/greenhouse-gas-emissions.html
https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions
http://www.bst-tsb.gc.ca/eng/stats/rail/2018/sser-ssro-2018.html

C5. Emissions methodology

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 CO_2e)
3,130,392

Comment
Base year emissions include emissions from biogenic sources.

SCOPE 2 (LOCATION-BASED)

Base year start
January 1, 2019

Base year end
December 31, 2019

Base year emissions (metric tons CO_2e)
48,842

Comment

SCOPE 2 (MARKET-BASED)

Base year start

Base year end

Base year emissions (metric tons CO_2e)

Comment

C5.2

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

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

C6. Emissions data

C6.1

What were your organization's gross global Scope 1 emissions in metric tons CO_2e?

REPORTING YEAR

Gross global Scope 1 emissions (metric tons CO_2e)
2,987,571

Comment

C6.2

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

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

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

Comment

C6.3

What were your organization's gross global Scope 2 emissions in metric tons CO_2e?

REPORTING YEAR

Scope 2, location-based
43,303

Comment

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?

Yes

C6.4A

Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

SOURCE

Purchased electricity in leased space

Relevance of Scope 1 emissions from this source
Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source
Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source (if applicable)
Emissions are not relevant

Explain why this source is excluded
Data is not available; emissions are anticipated to account for less than 1 percent of total Scope 2 emissions.

SOURCE

Halocarbon emissions from US operations

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source (if applicable)

Emissions are not relevant

Explain why this source is excluded

Data is not currently collected for the U.S. operations; emissions are anticipated to account for less than 0.001 percent of total Scope 2 emissions.

SOURCE

Propane consumption from US operations

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source (if applicable)

Emissions are not relevant

Explain why this source is excluded

Data is unreliable and therefore excluded; emissions are anticipated to reflect less than 0.1 percent of total Scope 1 emissions.

C6.5

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

PURCHASED GOODS AND SERVICES

Evaluation status

Relevant, calculated

Metric tonnes CO_2e

619,907

Emissions calculation methodology

An Economic Input Output (EIO) calculator was used to estimate emissions from purchased services and capital goods. We sorted the data into spend type based on EIO model categories and removed spend data that was already included in other Scope 3 categories. EIO categories by spend were totaled and converted into GHG emissions using factors from Carnegie Mellon University's Economic Input-Output Life Cycle Assessment (EIO-LCA).

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

0

Please explain

Emissions from purchased goods and services are considered relevant, as they are the second-largest source of emissions in the Scope 3 inventory.

CAPITAL GOODS

Evaluation status

Relevant, calculated

Metric tonnes CO_2e

0

Emissions calculation methodology

See explanation from Category 1: Purchased goods and services, since it was not possible to separate the procurement data for purchased goods and services and capital goods.

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

0

Please explain

Emissions from purchased capital goods are included in Category 1.

FUEL-AND-ENERGY-RELATED ACTIVITIES (NOT INCLUDED IN SCOPE 1 OR 2)

Evaluation status

Relevant, calculated

Metric tonnes CO_2e

859,849

Emissions calculation methodology

Fuel- and energy-related activities evaluated include upstream emissions from fuel used during operations, upstream emissions from fuel combusted for the generation of the electricity purchased by CP for use, and transmission and distribution (T&D) losses from electricity consumed in 2020. The specific methodology for these activities is as follows:

1. Upstream emissions from fuels used for stationary and mobile sources: To evaluate the well-to-tank (WTT) GHG emissions for fuels that CP consumes for locomotive, fleet and stationary sources during its operations, CP tracks the amount of fuel by type across our locations. We estimated emissions using GHGenius 5.01b for upstream emissions factors. Only GHG emissions required by the GHG Protocol (GHGP) were included in the GHGenius 5.01b emissions factors.

2. Upstream emissions from fuel combusted for the generation of the electricity purchased by CP: These emissions were estimated based on electricity consumed by geographic location. We used emissions factors for WTT emissions per kWh electricity consumed from fuel used to generate electricity from the U.K. Department for Environment, Food & Rural Affairs (DEFRA) 2020 by country. We then applied these emissions factors to the total electricity consumed for each location in CP's business.

3. Emissions from T&D losses: To evaluate the emissions from T&D losses of the electricity CP consumes during operations, we sourced T&D loss factors by percentage loss for all locations from EPA eGRID (U.S.) and The World Bank Open Data Portal (Canada). We used electricity emissions factors from eGRID and IEA to determine the specific location-based emissions from T&D losses for 2020 and then applied these to the total electricity consumed for each location.

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

0

Please explain

CP's fuel and energy-related activities, not captured as part of Scope 1 and Scope 2 GHG emissions, include upstream emissions associated with the T&D of acquired electricity, WTT fuel combusted for the generation of acquired electricity and WTT for mobile and stationary sources. Emissions from fuel- and energy-related activities are considered relevant, as they are the largest source of emissions in the Scope 3 inventory.

UPSTREAM TRANSPORTATION AND DISTRIBUTION

Evaluation status

Relevant, calculated

Metric tonnes CO_2e

180,525

Emissions calculation methodology

Upstream T&D emissions include those related to the transport of purchased material, truck transport of intermodal containers, and postage and couriers and haulage payments to other railroads to move goods for CP Rail. Emissions from the transport of purchased material were calculated using each order's weight and transport distance multiplied by ton-mileage emissions factors for trucks. For all other upstream transportation and distribution, we used an EIO calculator to estimate emissions from purchased transportation services. Purchasing data was sorted into classes of expenditures spend consistent with EIO model categories, totaled and converted into GHG emissions using factors from Carnegie Mellon University's EIO-LCA. The majority of emissions were from truck transport of intermodal containers when CP could not directly deliver materials to the client by rail.

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

5

Please explain

Emissions from upstream transportation account for 10.6 percent of CP's Scope 3 emissions and are therefore relevant.

WASTE GENERATED IN OPERATIONS

Evaluation status

Not relevant, calculated

Metric tonnes CO_2e

4,044

Emissions calculation methodology

CP tracks data on the volume and/or weight of waste generated in our facilities annually. This data is recorded by waste type (hazardous and non-hazardous) and by end-of-life treatment (landfilled, diverted, etc.). This information was used to convert waste to GHG emissions using waste treatment-specific emissions factors from the U.S. EPA Center for Corporate Climate Leadership (last updated April 2021). Only emissions factors from waste transportation, combustion and/or fugitive methane were included in emissions estimations. Avoided emissions such as stored carbon or other negative emissions were not included in alignment with the Scope 3 Guidance. Since the availability of emissions factors for recycling fluctuates, recycled materials without an emissions factor were conservatively assumed to have an emissions factor of 0.02 MT CO_2e/short-ton material, representing the transportation of the recycled material to the recycling facility. Other waste materials or sources that did not have emission factors were assumed to have an emission factor of 0.02 MT CO_2e/Short ton material.

CP's waste railroad ties are sent to cogeneration facilities as a supplemental fuel feedstock. Combustion emissions from processed railroad ties are not accounted for in this category per the GHGP's Scope 3 Guidance: "Companies should account for emissions from preparing and transporting waste that will be combusted in a waste-to-energy facility, but should not account for emissions from the waste-to-energy combustion process itself. These emissions should be included in Scope 2 GHG emissions by the consumers of energy generated from waste." Waste ties are transported to tie processing facilities using CP's gondola cars and locomotives. Emissions related to the transport of CP waste railroad ties are included in reported Scope 1 emissions. This estimation includes emissions from waste that is landfilled, recycled, incinerated or composted, as well as the emissions from the transportation of waste that is stored, treated via wastewater treatment or energy-recovered.

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

0

Please explain

GHG emissions from waste generated in CP's operations are not material and represent less than 1 percent of total Scope 3 emissions. These emissions are not considered relevant.

BUSINESS TRAVEL

Evaluation status

Relevant, calculated

Metric tonnes CO_2e

18,385

Emissions calculation methodology

CP followed a distance-based method to calculate approximate emissions related to employee flights. Data related to employee business travel by air was provided by CP's travel provider. The travel provider tracks the distance travelled for each employee flight. Flights were categorized by distance, including short haul (under 300 miles), medium haul (between 300 to 2,300 miles) and long haul (greater than 2,300 miles). CP used passenger emissions factors by flight distance from the U.S. EPA Center for Corporate Climate Leadership to calculate GHG emissions. CP collects data on employee car rentals from Avis, Budget and Enterprise, which track the miles travelled and gallons used by rental vehicles. CP used fuel emissions factors from the U.S. EPA Center for Corporate Climate Leadership to calculate GHG emissions. CP collects data on hotel stays through our travel provider. The system tracks the number of overnight hotel stays for each employee by country. Emissions factors for overnight hotel stays were sourced from U.K. DEFRA to calculate GHG emissions. Where employees' vehicles are used for business travel, CP tracks the amount spent on mileage reimbursement and then calculates the number of miles reimbursed using the mileage reimbursement

rate set by the Government of Canada. We calculated fuel usage based on the average fuel economy of a Canadian passenger vehicle and used fuel emissions factors from the U.S. EPA Center for Corporate Climate Leadership to calculate GHG emissions. CP tracks the total spend related to crew transportation services provided by third-party vendors. This information was used with an EIO model to calculate emissions for passenger ground transportation.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
51

Please explain
GHG emissions associated with business travel represents 1.1 percent of total Scope 3 emissions and are considered relevant.

EMPLOYEE COMMUTING

Evaluation status
Relevant, calculated

Metric tonnes CO_2e
16,998

Emissions calculation methodology
CP tracks the number of employees reporting to each CP facility. To estimate employee commuting emissions, CP used average commuting time and distance statistics for each region (by county) and by type of transportation (passenger car, public transit, carpooling) in the U.S. and Canada based on available government census data. Using emissions factors from the U.S. EPA Center for Corporate Climate Leadership to convert this information into GHG emissions.

For 2020, CP also identified a list of employees working from home throughout different portions of the year due to the COVID-19 pandemic. This data was used to determine total "employee years" where workers were not commuting to the office. This was subtracted from the overall value to determine associated emissions adjusted for working from home considerations.

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

Please explain
GHG emissions associated with employee commuting represent more than 1.0 percent of total Scope 3 emissions and are considered relevant.

UPSTREAM LEASED ASSETS

Evaluation status
Not relevant, explanation provided

Please explain
CP directly manages its assets and these emissions are included in our Scope 1 and Scope 2 GHG emissions. CP does not have any upstream leased assets and therefore Scope 3 GHG emissions from this source are zero (0).

DOWNSTREAM TRANSPORTATION AND DISTRIBUTION

Evaluation status
Not relevant, explanation provided

Please explain
Downstream transportation and distribution only includes emissions from transportation of sold products in vehicles and facilities not owned or controlled by CP. As a railway freight service provider, CP does not sell products. Therefore, downstream transportation and distribution are not relevant and GHG emissions from this source are zero (0). Any additional services purchased by CP to transport goods are included in Category 4: Upstream transportation and distribution.

PROCESSING OF SOLD PRODUCTS

Evaluation status
Not relevant, explanation provided

Please explain
As a railway freight service provider, CP does not process or sell any products. Therefore, the processing of sold products is not relevant and GHG emissions from this source are zero (0).

USE OF SOLD PRODUCTS

Evaluation status
Not relevant, explanation provided

Please explain
As a railway freight service provider, CP does not sell any products. Therefore, the use of sold products is not relevant and GHG emissions from this source are zero (0).

END OF LIFE TREATMENT OF SOLD PRODUCTS

Evaluation status
Not relevant, explanation provided

Please explain
As a railway freight service provider, CP does not sell any products. Therefore, the end-of-life treatment of sold products is not relevant and GHG emissions from this source are zero (0).

DOWNSTREAM LEASED ASSETS

Evaluation status
Not relevant, explanation provided

Please explain
CP directly manages its assets and these emissions are included in our Scope 1 and Scope 2 GHG emissions. CP does not have any downstream leased assets; therefore, Scope 3 GHG emissions from this source are zero (0).

FRANCHISES

Evaluation status
Not relevant, explanation provided

Please explain
CP does not own or operate any franchises; therefore, GHG emissions from this source are zero (0).

INVESTMENTS

Evaluation status
Not relevant, calculated

Metric tonnes CO_2e
0

Emissions calculation methodology
In 2020, CP had equity shares in several companies, primarily shortline and terminal railroads, none of which owned locomotives. The majority of emissions related to these companies are anticipated to be from electricity usage in office spaces. Using publicly available information, we were unable to find records of energy consumption or GHG emissions information for any of the companies. Therefore, we assumed that the emissions from these companies were small and not material.

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

Please explain
Emissions from investments account for less than 1 percent of our total Scope 3 emissions and therefore are not considered relevant.

OTHER (UPSTREAM)

Evaluation status
Not relevant, explanation provided

Please explain
CP does not have other (upstream) emissions that have not been accounted for in this inventory.

OTHER (DOWNSTREAM)

Evaluation status
Not relevant, explanation provided

Please explain
CP does not have other (downstream) emissions that have not been accounted for in this inventory.

C6.7

Are carbon dioxide emissions from biogenic carbon relevant to your organization?

Yes

C6.7A

Provide the emissions from biogenic carbon relevant to your organization in metric tons CO_2.

CO_2 emissions from biogenic carbon (metric tons CO_2)
1,246

C6.10

Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO_2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure
0.000393

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO_2e)
3,030,874

Metric denominator
unit total revenue

Metric denominator: Unit total
7,710,000,000

Scope 2 figure used
Location-based

% change from previous year
4

Direction of change
Decreased

Reason for change
Our gross Scope 1 and Scope 2 emissions intensity decreased by 4 percent due to emissions reduction projects which drove operational, asset and network efficiencies. CP has made substantial investments in our network to support longer and heavier trains which enhance operational capacity and efficiency. The following example outlines a 2020 investment in high capacity grain cars that contribute to emissions reductions at CP.

CP is currently undertaking a C$500M multi-year sourcing initiative to purchase 5,900 larger grain hopper cars to upgrade our grain car fleet. Newly acquired grain cars increase grain capacity by up to 40 percent per unit train enabling CP to increase grain transportation service efficiency for producers and the North American economy. A total of 3,700 high-capacity grain cars are now in service across CP's network. This project and associated operational improvements have allowed CP to transport more Canadian grain products during 2020 than any year in our history.

C-TS6.15

What are your primary intensity (activity-based) metrics that are appropriate to your emissions from transport activities in Scope 1, 2, and 3?

RAIL

Scopes used for calculation of intensities
Report just Scope 1

Intensity figure
0.00001

Metric numerator: emissions in metric tons CO_2e
2,886,515.7

Metric denominator: unit
t.mile

Metric denominator: unit total
272,360,000,000

% change from previous year
1.3

Please explain any exclusions in your coverage of transport emissions in selected category, and reasons for change in emissions intensity.
This metric only includes locomotive fuel consumption and excludes all facility-related Scope 1 and Scope 2 emissions. This is the most appropriate indicator of emissions related to transport activities as locomotive fuel emissions accounted for 95.2 percent of CP's total Scope 1 and Scope 2 GHG emissions in 2020.

ALL

Scopes used for calculation of intensities
Report just Scope 1

Intensity figure
0.00001

Metric numerator: emissions in metric tons CO_2e
2,886,515.7

Metric denominator: unit
t.mile

Metric denominator: unit total
272,360,000,000

% change from previous year
1.3

Please explain any exclusions in your coverage of transport emissions in selected category, and reasons for change in emissions intensity.
CP only offers rail-based transportation services; therefore, the presented intensity figure and response to this question are consistent with the prior response related specifically to rail transportation services. This metric only includes locomotive fuel consumption and excludes all facility-related Scope 1 and Scope 2 emissions. This is the most appropriate indicator of emissions related to transport activities as locomotive fuel emissions accounted for 95.2 percent of CP's total Scope 1 and Scope 2 GHG emissions in 2020.

C7. Emissions breakdowns

C7.1

Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

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 CO_2e)	GWP Reference
CO_2	2,723,254	IPCC Fifth Assessment Report (AR5 – 100 year)
N_2O	260,005	IPCC Fifth Assessment Report (AR5 – 100 year)
CH_4	4,270	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	41	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO_2e)
Canada	2,308,369
United States of America	679,202

C7.3

Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By activity

C7.3C

Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO_2e)
Freight Rail Service - locomotive fuel	2,886,516
On-Road Vehicle Fleet and Work Equipment	45,010
Off-Road Equipment	31,101
Heating Oil	743
Propane	5,588
Natural Gas (Building Heat)	18,572
Halocarbon Releases	41

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 CO_2e.

	Gross Scope 1 emissions, metric tons CO_2e	Comment
Transport services activities	2,987,571	Includes emissions for all activities, including emissions related to locomotive fuel, which accounted for 96.6% of 2020 Scope 1 emissions.

C7.5

Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO_2e)	Scope 2, market-based (metric tons CO_2e)	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	27,295	0	145,556	0
United States of America	16,008	0	38,102	0

C7.6

Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By activity

C7.6C

Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based (metric tons CO_2e)	Scope 2, market-based (metric tons CO_2e)
Freight rail services	43,303	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

Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO_2e.

	Scope 2, location-based, metric tons CO_2e	Scope 2, market-based (if applicable), metric tons CO_2e	Comment
Transport services activities	43,303	0	The emissions associated with purchased electricity are attributable to facility use in rail yards, maintenance operations and office-related functions.

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

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 CO_2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change	0	CP did not have any changes in renewable energy consumption in 2020.

	Change in emissions (metric tons CO_2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Other emissions reduction activities	83,321	Decreased	2.6	Total Scope 1 and 2 emissions were 3,030,874 MT CO_2e in 2020 and 3,179,234 MT CO_2e in 2019. The decrease in emissions due to emissions reduction initiatives implemented during the year combine to a total of 83,321 MT CO_2e in 2020 (a 2.6 percent decrease from 2019 total scope 1 and 2 emissions, according to the formula: (83,321 MT CO_2e / 3,179,234 MT CO_2e)*100 = 2.6 percent decrease. Emissions reduction initiatives that contributed to this decline are a result of CP's investments in our rail network, rolling stock and locomotive fleet to enhance operational capacity and efficiency.
Divestment	0	No change	0	CP did not have any divestments in 2020.
Acquisitions	7,607	Increased	0.24	CP announced the acquisition of Central Maine & Québec Railway (CMQ) in November 2019. With the CMQ acquisition, CP is now a 13,000-mile rail network connecting the Atlantic Coast to the Pacific Coast across six Canadian provinces and 11 U.S. states. Locomotive emissions related to this acquisition were reported to CDP starting in 2021. The CMQ acquisition accounted for 7,607 mt CO_2e in 2020, 0.24 percent of CP's total Scope 1 and 2 emissions, according to the formula: (7,607 MT CO_2e/ 3,179,234)*100 = 0.24 percent increase.
Mergers	0	No change	0	CP did not have any mergers in 2020.
Change in output	51,217	Decreased	1.61	CP's total revenue ton-miles (RTM) decreased by 1.61 percent from 2019 to 2020. A 1.61 percent decrease in RTMs has a proportional impact on CP's and energy consumption accounting for a 51,217 MT CO_2e decrease in total emissions from 2019 to 2020. This percent change in GHG emissions was calculated with the formula: (51,217 / 3,179,234)*100 = 1.61 percent decrease.
Change in methodology	0	No change	0	There were no changes to CP's methodology in 2020.
Change in boundary	0	No change	0	There were no changes to CP's boundary in 2020.
Change in physical operating conditions	0	No change	0	There were no changes to CP's physical operating conditions in 2020.

Unidentified	21,429	Decreased	0.67	CP's total Scope 1 and 2 emissions were 3,030,874 MT CO_2e in 2020 and 3,179,234 MT CO_2e in 2019, a year on year decrease of 148,360 MT. This decrease in GHG emissions is related to: 1. Emissions reduction initiatives led to a decrease in combined Scope 1 and Scope 2 emissions of 83,321 MT CO_2e (see explanation above in "Other emission reduction activities"). 2. CP's total revenue ton-miles (RTM) decreased by 1.61 percent from 2019 to 2020 corresponding to a reduction of 51,217 MT CO_2e due to change in output (see explanation above in "Change in output"). Inclusive of the above and additional factors impacting CP's year-over-year change to emissions reflected in this table, there is an additional unidentified emissions decrease of 21,429 MT CO_2e, or 0.68 percent compared to last year's total Scope 1 and 2 emissions. The unidentified decrease in GHG emissions was determined using the following formula: 148,360 (total Scope 1 and 2 emissions change between 2019 and 2020) – 83,321 (other emissions reduction activities) + 7,607 (acquisitions) - 51,217 (change in output) = 21,429. The 0.67 percent figure has been derived from the following formula: (21,429 / 3,179,234)*100 = 0.67 percent decrease.
Other	0	No change	0	There were no other changes in 2020.

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

What percentage of your total operational spend in the reporting year was on energy?

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

C8.2

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	No

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)	5,081	10,883,874	10,888,955
Consumption of purchased or acquired electricity		0	183,658	183,658
Total energy consumption		5,081	11,067,532	11,072,613

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	No
Consumption of fuel for the generation of heat	No
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	No

C8.2C

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

DIESEL

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
10,644,231.8

Emission factor
2.95

Unit
kg CO_2e per liter

Emissions factor source
NIR 2021 – National Inventory Report 1990–2019: Greenhouse Gas Sources and Sinks in Canada Part 2 – Table A6–14: Emission Factors for Energy Mobile Combustion Sources – Railways – Diesel Train

Comment
Emissions related to diesel is calculated based on amount (Litres of diesel) and a high-heating value (HHV) of 10.68 kWh/Litre is used to convert Litres of diesel to MWh energy.

HHV Source: HHV is calculated based on EPA table 1 - GHG emission factor hub 2020 – Distillate Fuel Oil No. 2.

FUEL GAS

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
106,030.7

Emission factor
2.307

Unit
kg CO_2e per liter

Emissions factor source
NIR 2021 – National Inventory Report 1990–2019: Greenhouse Gas Sources and Sinks in Canada Part 2 – Table A6–14: Emission Factors for Energy Mobile Combustion Sources – Light-duty Gasoline Vehicles (LDGVs) – Tier 2

Comment
Emissions related to fuel gas is calculated based on amount (Litres of fuel gas) and a high-heating value (HHV) of 9.68 kWh/Litre is used to convert Litres of fuel gas to MWh energy.

HHV Source: HHV is calculated based on EPA table 1 - GHG emission factor hub 2020 – Motor Gasoline.

BIODIESEL

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
3,851.8

Emission factor
2.472

Unit
kg CO_2e per liter

Emissions factor source
NIR 2021 – National Inventory Report 1990–2019: Greenhouse Gas Sources and Sinks in Canada Part 2 – Table A6–14: Emission Factors for Energy Mobile Combustion Sources

Comment
Emissions related to biodiesel (renewable source) is calculated based on amount (Litres of biodiesel) and a high-heating value (HHV) of 9.91 kWh/Litre is used to convert Litres of biodiesel to MWh energy.

HHV Source: HHV is calculated based on EPA table 1 - GHG emission factor hub 2020 – Biodiesel (100%).

BIOGASOLINE

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
1,229.1

Emission factor
1.518

Unit
kg CO_2e per liter

Emissions factor source
NIR 2021 – National Inventory Report 1990–2021: Greenhouse Gas Sources and Sinks in Canada Part 2 – Table A6–14: Emission Factors for Energy Mobile Combustion Sources

Comment
Emissions related to biogasoline (renewable source) is calculated based on amount (Litres of biogasoline) and a high-heating value (HHV) of 6.50 kWh/Litre is used to convert Litres of biogasoline to MWh energy.

HHV Source: HHV is calculated based on EPA table 1 - GHG emission factor hub 2020 – Ethanol (100%).

NATURAL GAS

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
105,209.5

Emission factor
48.74

Unit
kg CO_2e per GJ

Emissions factor source
NIR 2021– National Inventory Report 1990–2019: Greenhouse Gas Sources and Sinks in Canada Part 2 – Table A6.1–3: CH4 and N2O Emission Factors for Natural Gas: Industrial

Comment
Emissions related to Natural Gas is calculated based on amount (therms of natural gas) and a high-heating value (HHV) is used to convert therms of Natural Gas to MWh energy.

COMPRESSED NATURAL GAS (CNG)

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
20.5

Emission factor
0.00217

Unit
kg CO_2e per liter

Emissions factor source
NIR 2021 - National Inventory Report 1990-2019: Greenhouse Gas Sources and Sinks in CANADA Part 2: Table A6-14: Emission Factors for Energy Mobile Combustion Sources - Natural Gas

Comment
Emissions related to Compressed Natural Gas (CNG) is calculated based on the amount (litres of CNG) and a higher heating value (HHV) is used to convert therms of Natural Gas to MWh energy

FUEL OIL NUMBER 2

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
2,872.9

Emission factor
2.761

Unit
kg CO_2e per liter

Emissions factor source
NIR 2021 - National Inventory Report 1990-2019: Greenhouse Gas Sources and Sinks in CANADA Part 2 - Table A6.1-4: Emission Factors for Refined Petroleum Products - Light Fuel Oil - Industrial

Comment
Emissions related to Fuel is calculated based on the amount (Litres of Fuel oil) and a higher heating value (HHV) of 10.68 kWh/Litre is used to convert Litres of fuel oil to MWh energy.

HHV Source: HHV is calculated based on EPA table 1 - GHG emission factor hub 2020 – Distillate Fuel Oil No. 2.

PROPANE GAS

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
25,509.3

Emission factor
1.544

Unit
kg CO_2e per liter

Emissions factor source
NIR 2021 - National Inventory Report 1990-2019: Greenhouse Gas Sources and Sinks in CANADA Part 2 - Table A6.1-4: Emission Factors for Natural Gas Liquids - Propane Residential

Comment
Emissions related to Fuel is calculated based on amount (Litres of propane) and a high-heating value (HHV) of 7.05 kWh/Litre is used to convert Litres of fuel oil to MWh energy.

HHV Source: HHV is calculated based on EPA table 1 - GHG emission factor hub 2020 – Propane.

C-TS8.2F

Provide details on the average emission factor used for all transport movements per mode that directly source energy from the grid.

Category	Emission factor unit	Average emission factor: unit value	Comment
Rail	gCO_2/kWh	0	Given the long distances and challenging terrain across our network, CP does not transport materials using electrical energy sourced from the grid.

C-TS8.5

Provide any efficiency metrics that are appropriate for your organization's transport products and/or services.

Activity
Rail

Metric figure
0.003592

Metric numerator
Liters of fuel

Metric denominator
t.mile

Metric numerator: Unit total
978,413,572

Metric denominator: Unit total
272,360,000,000

% change from last year
1.2

Please explain
This is the fuel efficiency value used by CP. The numerator only represents diesel fuels consumed by locomotives and the denominator is in gross ton-miles (GTMs). The overall efficiency figure decreased 1.2 percent, as the litres of fuel consumed decreased slightly more than GTMs.

C9. Additional Metrics

C9.1

Provide any additional climate-related metrics relevant to your business.

C-TO9.3/C-TS9.3

Provide tracking metrics for the implementation of low-carbon transport technology over the reporting year.

Activity
Rail

Metric
Other, please specify
Equipment upgrades

Technology
Other, please specify
Refurbished/upgraded locomotives

Metric figure
30

Metric unit
Other, please specify
Number of locomotives refurbished/upgraded

Explanation
The locomotive modernization project is part of a multi-year locomotive fleet renewal program at CP. In 2020, CP upgraded 30 locomotives, increasing the total to 386 locomotives retrofitted through this initiative. Locomotive enhancements include technology upgrades, advanced diesel engines, improved cooling and traction control systems. All units were equipped with EPA-certified fuel/emissions reduction technologies, GE Trip Optimizer and Distributed Power systems. Emissions reductions associated with this project were conservatively estimated based on a 2.7 percent improved fuel-efficiency guarantee provided by the equipment vendor. CP anticipates the combined effect of locomotive upgrades coupled with installed fuel-saving technology will result in realized fuel savings beyond 2.7 percent. The estimated annual savings and corresponding payback period reflect the financial impact of projected fuel savings only.

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
Yes

Comment
To position CP as a leader in the transition to a low-carbon economy and fully execute our Climate Strategy, we recognize that new approaches will be required to deploy capital, operating budgets and people in the most efficient and effective ways possible. This will include systematic ways to:

- Identify potential carbon reduction levers.
- Rigorously assess new levers in terms of carbon reduction potential, feasibility for the rail sector and costs to CP.
- Conduct bench-scale and pilot testing.
- Successfully deploy promising alternative fuels and propulsion methods.
- Engage and collaborate with others to progress this work.

In support of these objectives, CP announced plans in 2020 to initiate a research and development program to design and build North America's first line-haul hydrogen-powered locomotive using fuel cells and batteries to power the locomotive's electric traction motors.

C-TO9.6A/C-TS9.6A

Provide details of your organization's investments in low-carbon R&D for transport-related activities over the last three years.

Activity
Rail

Technology area
Drivetrain

Stage of development in the reporting year
Applied research and development

Average % of total R&D investment over the last 3 years
81-100%

Comment
In December 2020, CP announced intentions to design and build North America's first line-haul hydrogen-powered locomotive using fuel cells and batteries to power the locomotive's electric traction motors. This work will refine the process of converting diesel-electric powertrains to hydrogen-electric powertrains over a series of three distinct locomotive models, which collectively represent most locomotive types in use throughout North America.

To support hydrogen locomotive operations, the project will include the installation of hydrogen production and fueling facilities at CP railyards in Calgary and Edmonton, Alberta, Canada. The Calgary fueling facility will include an electrolysis plant to produce hydrogen from water. This facility will operate on renewable power from solar panels at CP's headquarters campus and produce zero greenhouse gas emissions. The Edmonton facility includes a small-scale steam methane reformation system that will generate hydrogen from Alberta's natural gas resources. The system will be constructed to accommodate the possible future addition of greenhouse gas capture equipment.

CP's Hydrogen Locomotive Program will demonstrate and evaluate the technical performance of hydrogen-powered locomotives and supporting fueling infrastructure in real-world operations. The program will generate critical industry knowledge and experience that will inform commercialization and future development.

The project represents 100% of CP's R&D project spend specific to low-carbon initiatives over the last 3 reporting years.

C10. Verification

C10.1

Indicate the verification/assurance status that applies to your reported emissions.

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

C10.1A

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

SCOPE

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

CP 2020 GHG Verification Report.pdf

Page/ section reference

Auditor Assurance Opinion (pg. 24 and onward in the document): The verification is an independent third-party assessment of CP's 2020 GHG Report and is conducted in compliance with the requirements of ISO Standard 14064 on greenhouse gases. Based on our verification, the GHG inventory is reported in accordance with the verification criteria and free of material misstatements.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1B

Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

SCOPE

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

CP 2020 GHG Verification Report.pdf

Page/ section reference

Auditor Assurance Opinion (Appendix A, pg. 24 and onward in the document): The verification is an independent third-party assessment of CP's 2020 GHG Report and is conducted in compliance with the requirements of ISO Standard 14064 on greenhouse gases. Based on our verification, the GHG inventory is reported in accordance with the verification criteria and free of material misstatements.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1C

Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

SCOPE

Scope 3 (upstream & downstream)

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

CP 2020 GHG Verification Report.pdf

Page/section reference

Auditor Assurance Opinion (Appendix A, pg. 24 and onward in the document): The verification is an independent third-party assessment of CP's 2020 GHG Report and is conducted in compliance with the requirements of ISO Standard 14064 on greenhouse gases. Based on our verification, the GHG inventory is reported in accordance with the verification criteria and free of material misstatements.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

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?

Yes

C10.2A

Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C7. Emissions breakdown	Year on year change in emissions (Scope 1 and 2)	ISO14064-3	Auditor Assurance Opinion (Appendix A, pg. 24 and onward in the document): The verification is an independent third-party assessment of CP's 2020 GHG Report and is conducted in compliance with the requirements of ISO Standard 14064 on greenhouse gases. Based on our verification, the GHG inventory is reported in accordance with the verification criteria and free of material misstatements.
C4. Targets and performance	Progress against emissions reduction target	ISO14064-3	Auditor Assurance Opinion (Appendix A, pg. 24 and onward in the document): The verification is an independent third-party assessment of CP's 2020 GHG Report and is conducted in compliance with the requirements of ISO Standard 14064 on greenhouse gases. Based on our verification, the GHG inventory is reported in accordance with the verification criteria and free of material misstatements.
C6. Emissions data	Year on year emissions intensity figure	ISO14064-3	Auditor Assurance Opinion (Appendix A, pg. 24 and onward in the document): The verification is an independent third-party assessment of CP's 2020 GHG Report and is conducted in compliance with the requirements of ISO Standard 14064 on greenhouse gases. Based on our verification, the GHG inventory is reported in accordance with the verification criteria and free of material misstatements.
C8. Energy	Energy consumption	ISO14064-3	Auditor Assurance Opinion (Appendix A, pg. 24 and onward in the document): The verification is an independent third-party assessment of CP's 2020GHG Report and is conducted in compliance with the requirements of ISO Standard 14064 on greenhouse gases. Based on our verification, the GHG inventory is reported in accordance with the verification criteria and free of material misstatements.

C11. Carbon pricing

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

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

BC carbon tax
Canada federal fuel charge

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
33.4

Total cost of tax paid

Comment
Various Canadian provinces and the federal government have implemented carbon pricing programs to incentivize consumers to reduce fossil fuel use and related GHG emissions. Under the British Columbia carbon tax, CP is required to remit carbon taxes to British Columbia based on fuel consumption within the province during 2020. Costs to comply with the carbon tax program increase the price of CP locomotive fuel and associated operating costs. Any increase in operating costs related to operations within the province are allocated to CP's customers based on CP's Tariff 9800. The purpose of this tariff is to transparently convert carbon emissions costs from the method by which they are charged to the railway ($ per ton of CO_2-equivalent emissions per litre of fuel consumed) into a format applicable to customer shipments ($ per loaded car mile, $ per unit shipped, etc.). Tariff 9800 is publicly available and applies to all shipments moving through British Columbia to recover the incremental expense associated with carbon taxes or levies. The surcharge amount is calculated to recover this projected expense and appears as a separate line item on invoices for customer freight charges. If a new environmental tax is introduced or the carbon pricing rate adjusted, updated information will be added to the tariff. Tax amounts paid by CP are confidential and not available for disclosure.

CANADA FEDERAL FUEL CHARGE

Period start date
January 1, 2020

Period end date
December 31, 2020

% of total Scope 1 emissions covered by tax
47.4

Total cost of tax paid

Comment
Various Canadian provinces and the federal government have implemented carbon pricing programs to incentivize consumers to reduce fossil fuel use and related GHG emissions. Under the federal carbon tax, CP is required to remit carbon taxes to the federal government based on fuel consumption (except in provinces with an approved carbon pricing program ex. Quebec and British Columbia). Costs to comply with carbon tax programs effectively increase the price of locomotive fuel and associated operating costs to CP. Any increase in operating costs related to operations within this region are allocated to CP's customers based on CP's Tariff 9800. The purpose of this tariff is to transparently

convert carbon emissions costs from the method by which they are charged to the railway ($ per ton of CO_2-equivalent emissions per litre of fuel consumed) into a format applicable to customer shipments ($ per loaded car mile, $ per unit shipped). Specifically, the surcharges in the tariff apply to all shipments moving through Canadian provinces that are subject to the federal carbon pricing program to recover the incremental expense associated with carbon taxes or levies. A greenhouse gas emissions surcharge is applied to every shipment moving through applicable provinces and appears as a separate line item on invoices for freight charges. If a new environmental tax is introduced, a surcharge to pass through the new tax in an equitable manner will be added to the tariff. Tax amounts paid by CP are confidential and not available for disclosure.

C11.1D

What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

(Situation) CP actively engages in all carbon pricing programs that impact our operations.

(Action) To assure compliance with these programs, CP established a cross-functional team with participants from Treasury, Fuel Group, Commodity Taxation, Environmental Risk, Strategy and Legal. Subject matter experts regularly review program developments and implement appropriate compliance mechanisms.

(Task) During 2020, this team periodically reviewed carbon pricing program developments in Alberta, Québec, Manitoba, Saskatchewan and British Columbia, as well as at the federal level.

(Result) This team is responsible for all aspects of maintaining compliance, including fuel procurement, tracking, reporting, verification, sourcing carbon allowances (as needed), internal/external communications and meeting regulatory deadlines. For example, one output of this strategy is updating and communicating our annual Tariff 9800 to impacted customers. Tariff 9800 is a formal document that establishes province-level emissions surcharge rates for our customer's shipments to recoup carbon price costs related to fuels used in transporting our customers' goods. Maintaining a revenue neutral system to clearly articulate and distribute carbon costs to our customers, while maintaining competitive shipping rates, is a key part of our strategy for complying with carbon pricing regulatory systems. As governments implement or adjust environmental taxes or levies, CP updates surcharge rates reflected in Tariff 9800.

C11.2

Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

Does your organization use an internal price on carbon?

Yes

C11.3A

Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price

Navigate GHG regulations

Identify and seize low-carbon opportunities

GHG Scope

Scope 1

Scope 2

Application

This carbon price is applied company-wide at CP. Carbon pricing is used to assess potential financial risks to CP's operations from regulatory schemes and is also being developed for use by the capital assessment team.

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

30

Variance of price(s) used

Evolutionary Pricing: As a fuel-intensive business, increased carbon pricing regulation will directly impact CP's operating costs. The price of CP's services could consequently increase and, if the costs of service become too high, could impact CP's competitive advantage over alternative modes of transport based on competitors' abilities to reduce fuel consumption and carbon emissions. Through scenario analysis, CP modeled the effects of potential regulatory changes based on the three future pathways to understand the potential financial implications to CP's business from 2020 through 2050. An evolutionary carbon price increasing from $30 per tonne CO_2e in 2020 to $239 per tonne CO_2e in 2050 was evaluated in these scenarios.

Type of internal carbon price

Shadow price

Impact & implication

CP is currently exposed to carbon pricing in Canada. At both provincial and federal levels, Canadian governments are imposing carbon taxation systems and cap-and-trade market mechanisms in the jurisdictions in which CP operates. However, CP is not currently exposed to carbon pricing in the United States, as there is no American federal state-level carbon pricing systems in the jurisdictions in which CP operates.

As a fuel-intensive business, increased carbon pricing regulation will directly impact CP's operating costs. The price of CP's services could consequently increase and, if the costs of service become too high, could impact CP's competitive advantage over alternative modes of transport based on competitors' abilities to reduce fuel consumption and carbon emissions.

Through scenario analysis, CP modelled the effects of potential regulatory changes based on the three future pathways to understand the potential financial implications to CP's business from 2020 through 2050. Carbon pricing evaluated in these scenarios ranged from $30 to $239 per tonne. Our scenario analysis looked at long-term business risks and opportunities to make strategic financial planning decisions.

This process has informed CP's Climate Strategy and approach a carbon pricing to establishing science-based targets as well as helping to assess long-term climate-related risks and opportunities that will impact financial planning decisions. We plan to integrate the climate-related risks and opportunities into relevant business processes, including (but not limited to) enterprise risk management, capital expenditures and strategic planning. Integrating climate factors could include the creation of specific low-carbon budgets and inclusion of a shadow price informing business investment decisions. Specifically, CP's capital assessment team is developing a carbon pricing tool to support the capital expenditures assessment process to stress test our business decisions and drive investment in low carbon solutions.

C12. Engagement

C12.1

Do you engage with your value chain on climate-related issues?

Yes, our customers
Yes, other partners in the value chain

C12.1B

Give details of your climate-related engagement strategy with your customers.

Type of engagement
Education/information sharing

Details of engagement
Run an engagement campaign to education customers about your climate change performance and strategy

% of customers by number
100

% of customer - related Scope 3 emissions as reported in C6.5
100

Please explain the rationale for selecting this group of customers and scope of engagement
CP's rationale for engaging with all our freight services customers to help them understand how the use of CP's services impacts the GHG emissions associated with their supply chain, and ensure that this information is made available to our entire freight services customer base. The reason CP is sharing this information with its customers is to provide awareness of CP's strong performance in reducing GHG emissions and how customers can further benefit from the use of rail in reducing the overall impact of their supply chains. Engagement activities include regular customer one-on-one meetings, customer surveys, customer forums, company website resources and online shipment management tools such as CP's Customer Station. Upon request, CP will engage with customers to provide carbon emissions information related to customer-specific services performed by CP. CP will also direct customers to additional resources, including an online rail transport carbon calculator, to enable customers to evaluate the potential emissions impact of shipping materials from one destination to another using rail versus highway truck services. Interested customers will often approach customer account managers, who work with CP's Sustainability team to provide information on CP's climate change program and initiatives. CP also responds directly to customer supply chain surveys and the CDP questionnaire.

Impact of engagement, including measures of success
The success of our engagement is evidenced by increased customer interest in freight rail services as an opportunity to reduce customer GHG emissions related to the transportation of goods and materials. Several of CP's customers currently engage annually to discuss climate change practices, priorities and emissions associated with the use of our freight services. As climate change action and disclosure become increasingly important to investors and other shareholders, we expect interest from customers to increase, representing a greater share of our business.

In 2020, CP was approached by 17 existing customers and three potential customers (representing 12 percent of our freight revenue business), to evaluate GHG emissions associated with rail services and respond to their climate-related questions. We consider the percentage of our freight revenue business engaging with CP on our climate change practices and GHG emissions as a key metric for the success of our engagement practices. Our level of engagement has increased from 4 percent in 2019 to 12 percent in 2020, a three-fold improvement. We look forward to increasing the level of customer engagement surrounding climate change to 30% of CP's business by 2025. To help our customers track and manage emissions in their value chain, we will continue to track this interest and engagement. An increasing number of requests from customers for information about CP's sustainability performance also indicates that our efforts to share information about our strategy and performance are successful. CP also engages directly with customers (including Vale and Kellogg's) through the CDP supply chain program.

Ongoing interaction and collaboration with our customers informs CP's climate change and sustainability practices, shaping business decisions, climate strategies and the delivery of climate action measures.

C12.1D

Give details of your climate-related engagement strategy with other partners in the value chain.

In addition to our engagement with customers, CP engages with other partners in our value chain on climate-related issues, namely downstream power plants, who utilize the waste ties generated in our operations and our waste tie processor vendors. Based on our assessment of Scope 3 emissions, we know that waste ties are the largest waste source generated during our operations.

(Situation) CP generates approximately 1.2 million waste rail cross ties as part of our annual network maintenance and track renewal program. Wherever possible, CP avoids disposal of waste ties at landfill facilities, preferring to direct these materials for beneficial reuse purposes. Out of a shared interest in sustainability and climate-related impacts, we work with several vendors across our network to process waste rail ties into a variety of fuel materials, including renewable solid fuel feedstocks for cogeneration facilities and innovative biomass-based liquid fuel products.

(Task) CP regularly engages with our network of eight waste tie processors and 14 downstream cogeneration facilities and industrial plants to review practices and identify the sustainable end-of-life solutions for waste ties, including emerging interest and innovation in the production of renewable fuels from waste tie materials.

(Action) Starting in 2018, CP engaged Cielo Waste Solutions Corp. (Cielo) to evaluate the potential for processing waste rail ties into renewable liquid fuel products, including renewable naptha, kerosene (aviation jet fuel) and high-grade diesel. Following several months of testing at Cielo's demonstration plant in Aldersyde, Alta., Canada, the process demonstrated consistent performance on preliminary test results.

(Result) CP and Cielo entered into a multi-year feedstock supply agreement for new green refinery under planning and permitting in the community of Dunmore, Alta., Canada. Through this arrangement, CP has agreed to supply Cielo Waste Solution's new green refinery with a minimum of 2.5 million ties over five years.

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?

Direct engagement with policy makers
Trade associations

C12.3A

On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Carbon tax	Support	CP has a history of working with policymakers to ensure that regulations are aligned with the intended policy goals. Given the company's role as both a fuel transporter and a major fuel purchaser, CP has established a cross-functional team with participants from Treasury, Fuel Group, Commodity Taxation, Environmental Risk, Strategy and Legal, to review regulatory developments and implement appropriate compliance mechanisms.	Within Canada, a variety of carbon pricing programs have been created to incentivize consumers and businesses to reduce GHG emissions. These programs have primarily taken the form of carbon taxes, which price GHG emissions. In April 2019, a federal carbon pricing program applied a carbon price to the provinces without pre-existing programs. As a result, our operations are regulated through a patchwork of provincial and federal programs, highlighting the challenge to our business associated with the current approach to setting a price on carbon. In addition to the administrative challenges of navigating multiple pricing jurisdictions, carbon pricing results in higher rail service costs. To simplify this, we have been working with the RAC to promote Canadian regulatory changes that support the Canadian economy while also taking action against climate change. The rail sector's preference, as communicated to the Government of Canada, are that carbon tax burdens be offset by allowing a deduction for capital expenditures that reduce GHG emissions and to direct a portion of revenues collected from climate change initiatives to be reinvested into rail programs that incentivize low-emissions transportation solutions, thereby helping Canada reduce its overall GHG emissions. These recommendations support the government's ambitions to fulfill the objectives of the Pan-Canadian Framework on Clean Growth and Climate Change and the Transportation 2030 strategic plan. Details on the Canadian rail sector's recommendations to the Government of Canada can be found at: https://www.railcan.ca/wp-content/uploads/2019/08/August_2_-_2020_Prebudget_Submission_-_RAC_FINAL.pdf.
Other, please specify	Support	As a member of the Railway Association of Canada (RAC), CP engaged with other railroad members in reviewing Canada's low-carbon fuel standards regulations and provided comments to regulators on behalf of the rail sector.	CP and the RAC engaged with Government of Canada as they developed a regulatory framework for a low-carbon fuel standard in Canada. The rail sector specifically requested that regulations improve transparency for fuel users related to renewable fuel content mixed with conventional liquid fuels supplied into the marketplace by primary fuel suppliers as they comply with the new legislation. Lack of clarity in fuel qualities received by fuel users like the rail sector can lead to equipment performance concerns, and warranty issues and impact the operating range of locomotives.

C12.3B

Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3C

Enter the details of those trade associations that are likely to take a position on climate change legislation.

TRADE ASSOCIATION

Railway Association of Canada

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The RAC advocates on behalf of its members, representing more than 60 freight and passenger railway companies, and supports the Government of Canada's commitments under the Pan-Canadian Framework on Clean Growth and Climate Change and its vision for green and innovative transportation as outlined in the Transportation 2030 strategic plan. In January 2020, the RAC published an environmental brief summarizing the climate benefits associated with a modal shift from highway truck to rail, and urging governments to incentivize the optimal modal shift through programs like carbon pricing. The report, Helping Canada Stay on Track to Fight Climate Change, can be found here: https://www.railcan.ca/resources/

How have you influenced, or are you attempting to influence their position?

CP's Chief Legal Officer and Corporate Secretary and Assistant Vice-President, North American Advocacy are currently directors on the board of RAC. Alongside other rail industry leaders serving on the RAC's board of directors, they are responsible for the Association's strategic leadership and, in this capacity, engage in discussions with industry representatives, policymakers, and other stakeholders on public policy positions. https://www.railcan.ca/who-we-are/rac-board-of-directors

TRADE ASSOCIATION

Association of American Railroads

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The AAR advocates on behalf of the U.S. freight rail industry, leading policy development, research, standard-setting and technology organization that focuses on rail sector safety and productivity. In March 2021, the AAR released a new report on Freight Railroads & Climate Change outlining the intrinsic benefits that rail provides in reducing greenhouse gas emissions. The report establishes several policy positions including, 1) instituting market solutions to reduce climate change, 2) creating a user-pay system for freight transported on public highways, 3) emissions surcharge programs, 4) partnerships for research funding, 5) streamlining of railroad regulation to support decarbonization, 6) support for carbon capture, utilization and storage, and 7) encouraging investment in decarbonization practices. The report, Freight Railroads and Climate Change can be found here: https://www.aar.org/wp-content/uploads/2021/02/AAR-Climate-Change-Report.pdf

How have you influenced, or are you attempting to influence their position?

CP is represented at AAR by the Director of Federal and State Government Affairs and is a state representative for Illinois, Iowa, Maine, Michigan, Minnesota, Missouri, New York, North Dakota, Ohio, South Dakota, Vermont and Wisconsin. In this capacity, we engage in discussions with industry representatives, policymakers and other stakeholders on public policy positions. 2020-State-by-State-Directory.pdf (aar.org)

TRADE ASSOCIATION

Regional Railroad Associations:

Regional Railroad Associations: CP is a member of several regional railroad associations in the U.S., such as the Michigan Railroads Association, Minnesota Regional Railroads Association, Illinois Railroad Association, Railroads of New York and Wisconsin Railroad Association. These trade associations review all introduced legislation in the House and Senate, share proposed legislation affecting the rail industry with its members and coordinate the formulation and communications of final industry positions regarding legislation to the legislature. These associations are actively involved with several state departments, including the departments of Transportation, Environmental Quality and Economic Development Corporation, regarding environmental, regulatory and economic development issues.

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Regional railroad associations advocate for policy priorities that favour the development of the freight rail industry in the U.S. and preserve its unique ability to reduce highway gridlock, fuel consumption, GHG emissions and pollution.

How have you influenced, or are you attempting to influence their position?

CP's Director of Federal and State Government Affairs is on the Executive Committee of the Illinois Railroad Association, Michigan Railroads Association, Railroads of New York, and Minnesota railroad association. In that capacity, we engage in discussions with industry representatives, policymakers, and other stakeholders on public policy positions.

http://michiganrailroadsassociation.com/who-we-serve,
http://illinoisrailroadassociation.com/executive-committee,
http://www.railroadsofny.com,
https://www.mnrailroads.com/

TRADE ASSOCIATION

Go Rail

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

GoRail is a non-profit advocacy organization that works with community leaders across the U.S. to share knowledge about the public benefits of freight rail investments and mobilize them in support of a better and more sustainable rail system. GoRail advocates for communications with federal lawmakers directly by participating in open public dialogue (such as the Railroad Day on Capitol Hill), and outlining the policy priorities for freight railway, targeted at preserving rail's private investments.

How have you influenced, or are you attempting to influence their position?

CP's Director of Federal and State Government Affairs is on the GoRail Board of Directors, and in that capacity, we engage in discussions on public policy positions.

TRADE ASSOCIATION

Business Council of Canada

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The Business Council of Canada (BCC) is a non-profit, non-partisan corporate advocacy organization representing more than 150 major businesses that have played an influential role in public policy since the 1970s. The BCC's position is to 'strengthen the economy', and one topic of focus is on resources and the environment. In April 2021, the BCC released a report on Clean Growth 3.0 outlining its current views on climate action. The BCC holds that the ambition to reach net zero emissions must also support sustainable economic growth. The report, Clean Growth 3.0, can be found here: https://thebusinesscouncil.ca/report/clean-growth-3-0/

How have you influenced, or are you attempting to influence their position?

CP's President and Chief Executive Officer is a member of the BCC and in that capacity, we engage in discussions on public policy positions.

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?

To ensure broad alignment across the business, CP released the company's first public statement on climate change, which acknowledges the effects of rising global temperatures and lays out the company's commitment to ongoing efforts to mitigate these impacts.

The statement outlines the following key principles:

1. CP commits to support the goals of the Paris Agreement, which seeks to limit global temperature rise to well below 2 degrees Celsius above pre-industrial levels.
2. CP aligns with recognized initiatives that bring governments, sectors and companies together, such as the Pan-Canadian Framework on Clean Growth and Climate Change plan and the resulting Greenhouse Gas Pollution Pricing Act (Canada), to the extent that they apply to CP's operations, as well as the Task Force on Climate-related Financial Disclosures.
3. CP supports "public policy aimed at reporting and reducing emissions, and lowering the impact of the freight rail sector on the environment".

In 2021, CP developed a Climate Strategy to focus on the company's climate actions on innovation, collaboration and thought leadership. The Climate Strategy builds on CP's Climate Statement and outlines our approach to manage potential climate-related impacts across the business. A key component of the Climate Strategy is to drive internal alignment while engaging suppliers, customers, rail transportation peers and policymakers to help lead industry-wide change. This includes strategic engagements that support our Climate Strategy, including topics related to cap-and-trade, carbon taxes, fuel efficiency standards, renewable fuel standards and emissions reporting programs.

CP's Climate Commitments, Climate Strategy and overall sustainability policies are reviewed with CP's Executive team, and the Board level Risk and Sustainability Committee. Climate Commitments and Climate Strategy are approved by the Board while CP sustainability policies are approved by the President & CEO for company-wide alignment. CP's cross-functional Sustainability Steering Committee (SSC) oversees the implementation of CP's Climate Strategy and sustainability policy commitments. The SSC, consisting of several senior leaders, meets regularly to discuss sustainability planning, policy objectives and review implementation across CP's most material environmental, social and economic topics, including climate change. This committee oversees monitoring, reporting and driving sustainability and climate change performance. Activities are also reported to the Board level Risk and Sustainability Committee to ensure consistency with the company's Climate Strategy.

CP's sustainability team supports all sustainability practices and policy development, focusing on areas of business alignment and sustainability synergies. Positions and trends are discussed regularly with this team to support internal and external alignment.

C12.4

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

PUBLICATION

In mainstream reports

Status

Complete

Attach the document

Notice of Annual and Special Meeting and Management Proxy Circular 2021.pdf

Page/Section reference

Page 5: Message from the Chair of the Risk and Sustainability Committee of the Board.

Page 92: Environmental, Social and Governance

Content elements

Governance

Strategy

Other metrics

Comment

2021 Management Proxy Circular

PUBLICATION

In voluntary sustainability report

Status

Complete

Attach the document

CP-CSR-data-supplement-2020.pdf

Page/Section reference

Page 8-11: Emissions and other figures

Content elements

Emissions figures
Other metrics

Comment

2020 Corporate Sustainability Report Data Supplement

PUBLICATION
In voluntary sustainability report

Status
Underway – previous year attached

Attach the document
2018CPRCorporateSustainabilityReport.pdf

Page/Section reference
Page 50–55: Energy Efficiency and Emissions

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Other metrics

Comment
2018 Corporate Sustainability Report

PUBLICATION
In voluntary communications

Status
Complete

Attach the document

Page/Section reference

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

PUBLICATION
In voluntary communications

Status
Complete

Attach the document
CP_Rail_Climate_Strategy.pdf

Page/Section reference
Please refer pages 1 to 21.

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment
CP Climate Strategy

C15. Signoff

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

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

Job title	Corresponding job category
Executive Vice-President and Chief Financial Officer	Chief Financial Officer (CFO)

Appendix 1: Verification Report

Appendix A

Assurance Opinion

455 Phillip Street, Unit 100A
Waterloo, Ontario N2L 3X2
Canada
www.ghd.com

GHD Reference No: 11196249

20 July 2021

Mr. Nirwair Bajwa
Specialist Sustainability, Climate & Energy
Canadian Pacific
7550 Ogden Dale Road SE
Calgary, Alberta T2C 4X9

Assurance Report

Dear Mr. Bajwa

The purpose of this letter is to clarify matters set out in the Assurance Report. It is not an Assurance Report and is not a substitute for the Assurance Report.

This letter and the verifier's Assurance Report, including the opinion(s), are addressed to you and are solely for your benefit in accordance with the terms of the contract. We consent to the release of this letter by you to the CDP in order to satisfy the terms of CDP disclosure requirements but without accepting or assuming any responsibility or liability on our part to CDP or to any other party who may have access to this letter or our Assurance Report.

In accordance with our engagement with you dated April 16, 2021 (the "contract") and for the avoidance of doubt, we confirm that our *Verification Report: 2020 CDP GHG Report* to you dated July 20, 2021 (the "Assurance Report") incorporated the following matters:

1. Boundaries of the reporting company covered by the Assurance Report and any known exclusions*[1]:

CP operations assessed as part of this verification included CP's entire corporate operations, which includes all sources in which CP has majority ownership and operational control. The inventory boundary includes the CP direct mobile emissions (locomotive and other vehicles such as corporate on-road and off-road vehicles), direct stationary combustion (building heating), and indirect emissions due to electricity supply to CP corporate operations. Other indirect (Scope 3) emissions included in the inventory include purchased goods and services, capital goods, fuel and energy-related activities, upstream transportation and distribution, waste generated in operations, business travel, and employee commuting. Verification is completed at the corporate level.

*1 Optional field

2. Emissions data verified - broken down by Scope 1, Scope 2, and Scope 3 categories with figures given; option to include other relevant data that has been verified with figures:

Total Entity-Wide Emissions Verified

Total Scope 1 Emissions[2]:	2,987,571 tonnes CO_2e
Biodiesel Scope 1 Emissions:	1,246 tonnes CO_2e
Scope 2 Emissions:	43,303 tonnes CO_2e
Scope 3 Emissions:	1,699,708 tonnes CO_2e

Reporting Metrics in the CDP Climate Change Questionnaire 2021 Verified

– **Section C4.1b –** Science-Based Target (SBTi) Well to Wheel (WTW) rail freight transport emission reduction from 2019 to 2030 of 38.3 percent.

3. Period covered (e.g., '12 months to DD MM YY'):

The reporting period is between 01/01/20 and 31/12/20.

4. Verification standard used:

For the verification of the 2020 GHG Report, GHD has applied ISO 14064-3.

5. Assurance opinion (incl. level of assurance and any qualifications):

The GHG Protocol states, "as a rule of thumb, an error is considered to be materially misleading if its value exceeds 5 percent of the total inventory for the part of the organization being verified." Consistent with this, and industry practice, GHD established a quantitative materiality for this verification of ±5 percent of the total reported GHG emissions. An individual error, misrepresentation, or a series of discrete errors, omissions or misrepresentations or individual or a series of qualitative factors, when aggregated may be considered material.

– Net sum of all Scope 1 discrepancies: 0.01 percent under reporting.
– Net sum of all Scope 2 discrepancies: no discrepancies noted.
– Net sum of all Scope 3 discrepancies: 0.34 percent under reporting.

The purpose of verification was to have an independent third party assess CP's 2020 GHG Report, calculations and compliance with the requirements of ISO 14064-3, the *GHG Protocol,* and associated guidance. The objective of the verification was to provide CP with assurance that there are no material misstatements in the 2020 GHG Report and that the information reported is accurate and consistent with the requirements of the *GHG Protocol*.

Based on our verification, the GHG statement is, in all material aspects, in accordance with the verification criteria and is free of material misstatements.

[2] Excluding CO_2 from biodiesel.

6. Verification provider and accreditations (if relevant):

VERIFICATION BODY NAME:	GHD Limited
VERIFICATION BODY ADDRESS:	455 Phillip St., Waterloo, Ontario, N2L 3X2
VERIFICATION BODY CONTACT:	Mr. Gordon Reusing
TITLE:	Principal
TELEPHONE:	519-340-4231
EMAIL:	Gordon.Reusing@ghd.com

Accreditations: GHD is a Canadian based company accredited by the American National Standard Institute (ANSI) under ISO 14065 to provide organizational level verification services.

7. Lead verifier name and relevant accreditations/professional membership (if relevant):

LEAD VERIFIER:	Mr. Neil Lonsdale
TITLE:	Environmental Engineer
TELEPHONE:	519-340-3835
EMAIL:	Neil.Lonsdale@ghd.com

8. This letter should be prepared on the verifier's letterhead or include the signature of the lead verifier (or authorized signatory/organization responsible for issuing the Assurance Report/statement) in the box below:

Neil Lonsdale, P. Eng.