2018 Report on Activities

CLIMATE CHANGE

Why We Engage

Climate change can present material financial risks and opportunities for companies and impact long-term investment values. The global transition to lower-carbon sources of energy will have far-reaching implications for investors. We believe companies should have a transparent and robust approach to assessing the challenges posed by climate change, so investors can make informed decisions.

What We Seek

- Enhanced practices related to governance, strategy, risk management, performance metrics, and targets and opportunities.
- Improved disclosure on potential exposure to near-term and long-term climate change-related risks and subsequent impact on company strategy and profitability.

Engagement

Climate change is one of the most significant physical, social, technological and economic challenges of our time. Its impacts are expected to be pervasive and broad-ranging. Scientists believe it is critical to limit global warming to less than two degrees Celsius (2°C) above pre-industrial levels in order to prevent irreversible damage. Rising temperatures and sea levels create physical and transition risks, such as water scarcity, threats to biodiversity, extreme weather and policy and market risks.

Such changes also create potential investment opportunities in areas such as technological innovation and renewable energy (see table on page 2 for details) that may present themselves in the near, medium or long term. Given our exceptionally long investment horizon, we are actively addressing climate change to increase and preserve economic value, in accordance with our mandate. The implications of the global transition to lower-carbon sources of energy will be far reaching for investors and companies alike.

CPPIB's efforts to understand these implications and take commensurate action started more than a decade ago and will accelerate in coming years. Our comprehensive enterprise-wide approach integrates climate change considerations into our risk framework and across relevant investment activities to build and protect long-term investment value (see page 5 for details on our Climate Change Steering Committee and Climate Change Project Management Office).

We take a leading role in encouraging companies to improve climate change disclosure and practices and helping to develop global standards for how they do this, such as through our participation on the Financial Stability Board's (FSB) Task Force on Climate-related Financial Disclosures (Task Force) (see page 11 for more information). CPPIB's commitment to stewardship and determining material financial impact means we have a responsibility to press companies to be transparent about challenges posed by climate change.

What types of **climate change**-related risks and opportunities should investors consider?

The table below from the Task Force highlights numerous investment risks and opportunities associated with climate change. Climate change-related risks can be broadly classified into two categories: transition risks – regulatory, technological, market-based demand and/or reputational risks that could result from the shift towards a lower-carbon economy; and physical risks – direct event-driven (acute) or longer-term (chronic, potentially resulting in food and water scarcity) risks associated with climate change. Climate change-related opportunities can be classified according to resource efficiency, energy source, products and services, the development of new markets and asset resilience.

CLIMATE CHANGE-RELATED RISKS AND OPPORTUNITIES

TYPE	CLIMATE CHANGE-RELATED RISKS
TRANSITION RISKS	**Policy and Legal** › Increased pricing of GHG emissions › Enhanced emissions-reporting obligations › Mandates on and regulation of existing products and services › Exposure to litigation
	Technology › Substitution of existing products and services with lower emissions options › Unsuccessful investment in new technologies › Costs to transition to lower emissions technology
	Market › Changing customer behaviour › Uncertainty in market signals › Increased cost of raw materials
	Reputation › Shifts in consumer preferences › Stigmatization of sector › Increased stakeholder concern or negative stakeholder feedback
PHYSICAL RISKS	**Acute** › Increased severity of extreme weather events such as cyclones and floods
	Chronic › Changes in precipitation patterns and extreme variability in weather patterns › Rising mean temperatures › Rising sea levels

TYPE	CLIMATE CHANGE-RELATED OPPORTUNITIES
RESOURCE EFFICIENCY	› Use of more efficient modes of transport › Use of more efficient production and distribution processes › Use of recycling › Move to more efficient buildings › Reduced water usage and consumption
ENERGY SOURCE	› Use of lower-emission sources of energy › Use of supportive policy incentives › Use of new technologies › Participation in carbon market › Shift towards decentralized energy generation
PRODUCTS AND SERVICES	› Development and/or expansion of low emission goods and services › Development of climate adaptation and insurance risk solutions › Development of new products or services through R&D and innovation › Ability to diversify business activities › Shift in consumer preferences
MARKETS	› Access to new markets › Use of public-sector incentives › Access to new assets and locations needing insurance coverage
RESILIENCE	› Participation in renewable energy programs and adoption of energy-efficiency measures › Resource substitutes/diversification

Source: See pages 9–10 of *Recommendations of the Task Force on Climate-related Financial Disclosures*. Available at www.fsb-tcfd.org.
Note: The risks and opportunities described in the table are not mutually exclusive, and some overlap exists.

For more than a decade, we have been working with our portfolio companies on climate change-related issues, including understanding their levels of greenhouse gas (GHG) emissions, improving their climate change-related disclosure and advancing best practices related to climate change. We believe these interactions, as well as pressing them for improvements, often in collaboration with other investors, will help build long-term value. As an investor with a long-term horizon, we can be a patient provider of capital and help the companies we invest in bring about positive change. Rather than automatically selling investments that are exposed to possible climate change risks, we are an active asset owner that seeks to better understand these risks, take them into consideration and respond accordingly.

Direct engagements

This year, we again led and participated in collaborative engagements alongside other Canadian and global investors to press large GHG emitters in oil and gas, utilities and other sectors to improve disclosure related to GHG emissions, strategies and performance. It is encouraging that a number of companies provided enhanced disclosure regarding climate change-related matters and the potential long-term impacts to their businesses. We will continue pressing for additional enhanced disclosure, which will better enable investors to assess the risks and opportunities presented by climate change.

Hermes EOS engagements

In addition to engagement work done by CPPIB's Sustainable Investing group directly, CPPIB also works with Hermes EOS, our global collaborative engagement platform. Hermes EOS's work focuses on sectors most exposed to climate change, including oil & gas, mining, metals, materials, utilities, automotive and financial services, as well as supply chain considerations in the retail and consumer goods sectors. In addition to engagements with companies, Hermes EOS contributes to the work of other global organizations on climate change, including the Institutional Investors Group on Climate Change (IIGCC) and the Task Force on Climate-related Financial Disclosures (see page 12).

CDP Climate Change Program

We support the CDP, formerly known as the Carbon Disclosure Project, which seeks increased disclosure and management of climate change risks from over 6,300 companies globally. Since its inception in 2006, more than 800 investors have signed on to the initiative, representing US$100 trillion in assets under management.

Working with companies to reduce methane emissions

CPPIB is on the Advisory Committee of the United Nations-supported Principles for Responsible Investments (PRI) collaborative engagement on methane risks in the oil and gas and utilities sectors. The focus of the engagement is to encourage companies to reduce methane emissions, improve management of methane emissions and enhance disclosure.

Methane, the main constituent of natural gas, is a colourless, odourless greenhouse gas (GHG). The gas has a wide range of sources, from decomposing biological material to leaks in natural gas pipelines. It is a far more potent greenhouse gas than carbon dioxide (CO_2). Methane traps much more heat than the equivalent amount of CO_2 while in the atmosphere, although it dissipates more quickly. According to data from the Intergovernmental Panel on Climate Change (IPCC), methane is 84 times more potent than CO_2 over a 20-year time frame and is responsible for a quarter of the global warming we are experiencing today.

The PRI initiative was launched in early 2017. We continue to take an active role and have chosen to lead a number of the more than 30 engagements alongside 35 other global investors.

Managing methane is particularly important because of the role natural gas is playing in the global energy transition, with many power generators migrating from coal to natural gas as part of their transition to renewable energy sources.

We continue to collaborate with the CDP to engage with energy companies on climate change risks and opportunities. In 2017, a representative from CPPIB attended CDP's energy company and investor roundtable which included discussions from companies about their views on the CDP climate change information request, the Financial Stability Board's Task Force on Climate-related Financial Disclosures recommendations (see page 12) and climate-related scenario analysis.

Proxy voting

Over the reporting period, CPPIB supported more than 20 climate change-related shareholder resolutions. Several of these sought deeper disclosure on five areas related to climate change risk and opportunity management: (i) ongoing operational emissions management, (ii)) asset portfolio resilience, (iii) low carbon energy research, (iv) management of methane emissions and (v) board oversight of climate change (see pie chart to the right).

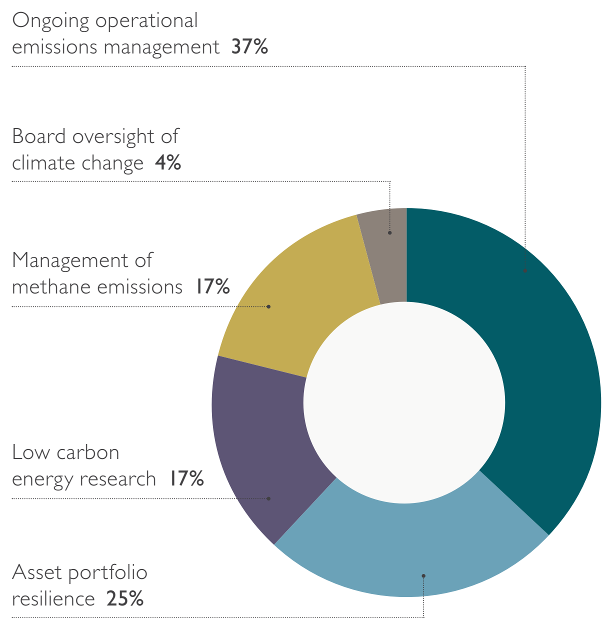
CPPIB has been supporting shareholder proposals that encourage companies to improve disclosure of climate change-related risks and opportunities for over a decade. Shareholder support for these climate change-related resolutions can be seen in the bar chart to the right for a select number of companies. Fewer of these shareholder resolutions were brought forward at annual meetings compared with a year earlier. We believe this is because companies have been more willing to reach agreements with proponents of climate-related proposals. CPPIB views this as a welcome sign of progress.

The support for climate change-related resolutions is encouraging, and we hope it will continue to motivate companies to improve their disclosures and management of relevant climate change-related risks and opportunities.

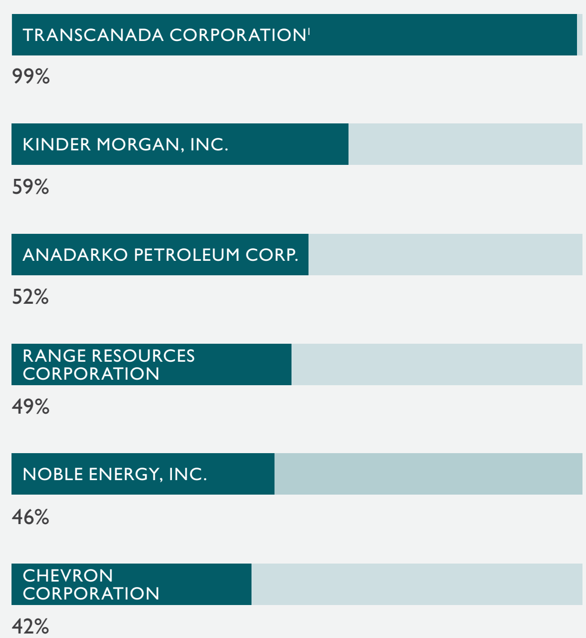
The bar chart to the right shows the proportion of shareholders who agreed the companies in question should conduct assessments of long-term impacts of climate change policies aimed at reaching the globally agreed-upon two degrees Celsius target or improve their reporting in relation to methane emissions management.

CLIMATE CHANGE-RELATED SHAREHOLDER PROPOSALS THAT CPPIB SUPPORTED IN 2018

SHAREHOLDER PROPOSALS BY TYPE



SELECT RESOLUTIONS THAT RECEIVED HIGH LEVELS OF SHAREHOLDER SUPPORT



1 Board recommended shareholders support the proposal

Climate Change Steering Committee

CPPIB views climate change as one of the world's most significant physical, social, technological and economic challenges. The complexity for investors is compounded by factors that include the absence of a historical fact set, the requirement to forecast probabilities into the future and a lack of standardized disclosure among companies.

We make decisions in the best interests of current and future beneficiaries – including what and when we buy, hold or sell. To do so, we access and carefully evaluate data and leverage external scientific expertise with the aim of making prudent forecasts. As world energy markets transition to lower-carbon sources, the implications for investors will be far-reaching.

We aim to be a leader among asset owners and managers in understanding the investment risks and opportunities presented by climate change. Portions of our portfolio, including fossil fuel producers, are exposed to policy, technology, shifting demand, market and other climate change transition risks. As such, investments and assets must be properly priced to reflect these risks and offer sufficiently attractive potential returns. At the same time, new investment opportunities in sectors such as renewable power and resource efficiency will continue to emerge.

We apply insight and expertise and monitor developments as we construct our long-term portfolio, rather than setting targets or timelines that could compel us to sell or buy assets at a sub-optimal time. This is integral to our overall investment philosophy and positions us to maximize our future returns. It also protects our holdings against potential losses, the risk of stranded assets and overpaying for investments as the global energy transition takes place.

With these considerations in mind, CPPIB launched an internal Climate Change Working Group (CCWG) in 2016 to provide more effective focus in this area. The group's efforts have since been formalized into a Climate Change Steering Committee (CCSC) that governs our climate change initiative organization-wide.

The Climate Change Project Management Office, which was created in 2017 and is accountable to the CCSC, oversees CPPIB's multiple climate change work streams, including those focused on the development of a climate change toolkit, a dynamic global energy outlook and a carbon footprinting tool (see call-out box on page 6). These climate change-related work streams involve a coordinated, cross-departmental effort.

Climate Change Steering Committee (left to right): Ben Lambert, Rocky Ieraci, Amy Flikerski, Stephanie Leaist, Neil Beaumont and Caroline Rogers. *Absent: Sam Blaichman, Dominic Dowd, Martin Healey, Bill Holland, Martin Laguerre and Steven Richards.*

Key climate change-related initiatives

Climate Change Toolkit

CPPIB is developing a toolkit to help its investment teams better assess and understand the impact of climate change on both our existing portfolio and potential investments. The toolkit also includes a framework for evaluating risks at the asset, sector and geographic levels. Other tools include regulatory monitoring, stress testing and organizing a catalogue of climate change research, analysis and external expertise.

Energy Outlook

When buying or selling energy assets, CPPIB teams carefully review energy demand forecasts. We are creating an in-house dynamic global energy outlook to serve as a reference point for investment reviews and portfolio allocation decisions. This energy outlook incorporates a range of views and analysis from the market to determine the path and pace of the transition to a lower-carbon economy.

Reporting and Communications

We apply a comprehensive communications strategy to share information on our climate-related efforts, including expanded disclosure through existing publications such as our Sustainable Investing and Annual reports. The Financial Stability Board's (FSB) Task Force on Climate-related Financial Disclosures will continue to inform our work. Transparency is critical to foster and promote the confidence of our stakeholders.

Top Down Assessment

We are assessing CPPIB's climate risk exposure at the total portfolio level and analyzing the potential economic impact of different climate-related scenarios on the overall portfolio. This is part of our long-term portfolio design framework.

Technology and Data

CPPIB is enhancing our technology tools and processes to enable enterprise-wide data and information capabilities to support climate change-related work in an integrated manner.

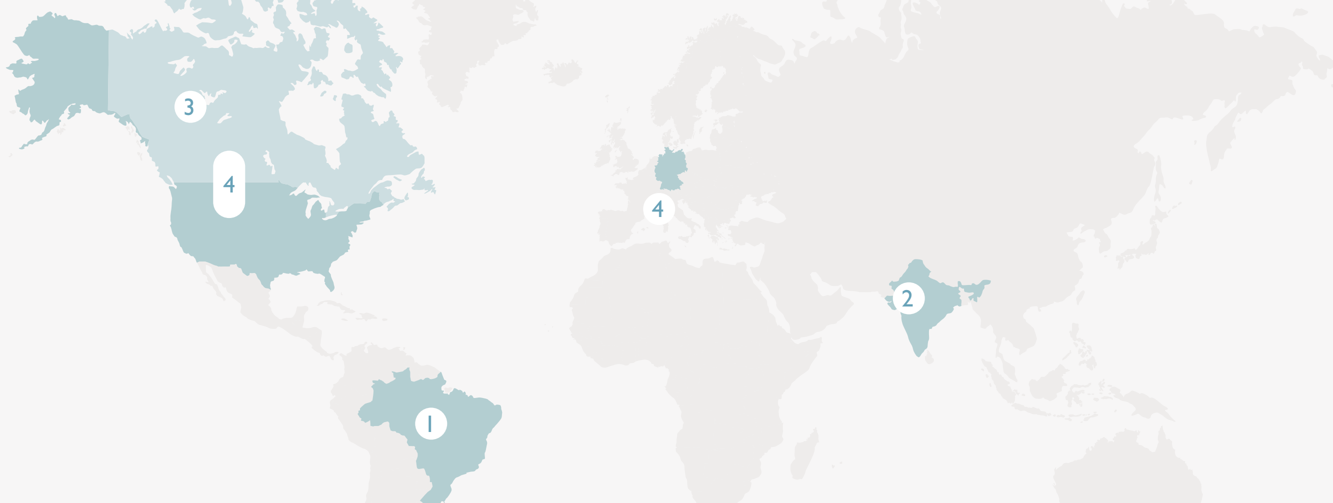
Carbon Footprinting Tool

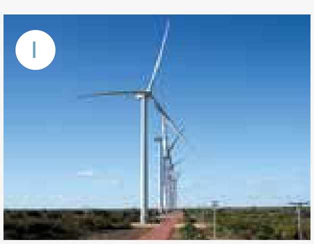
CPPIB has developed an in-house technology tool to measure greenhouse gas emissions and other climate change-related data from our public equities portfolio. This information can help inform our investment risk assessment and provide future insights to assist in the expansion of our measurement efforts beyond public assets. In developing this technology, we have been closely monitoring emerging best practices.

CPPIB's expanding portfolio of renewable energy assets

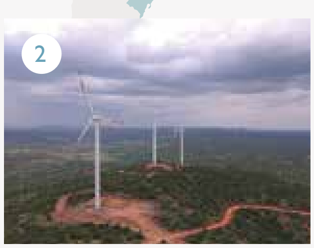
CPPIB's investment in renewables is aligned with our mandate and belief they can provide attractive risk-adjusted returns when done in a thoughtful, prudent manner. CPPIB has actively explored opportunities in this sector, which led to the following transactions:

- In December 2017, CPPIB signed agreements with Brazil's Votorantim Energia to form a joint venture, acquiring two operational wind parks located in Northeastern Brazil through an initial contribution of $272 million in equity.
- In January 2018, CPPIB announced plans to acquire a 6.3% stake in ReNew Power, a leading Indian renewable energy developer and operator with clean energy capacity diversified across wind, utility-scale solar and rooftop solar power-producing assets. CPPIB's initial investment of US$144 million was followed by an additional US$247 million in April, bringing our total investment in ReNew to US$391 million. This investment was undertaken by our Relationship Investments group.
- In April 2018, CPPIB signed an agreement to acquire a portfolio of six Canadian operating wind and solar power projects from NextEra Energy Partners for $741 million. We continue to work with affiliates of NextEra under a long-term agreement to manage operations of these assets. The business now operates as Cordelio Power.
- In May 2018, CPPIB signed agreements with Enbridge Inc. to acquire 49% of Enbridge's interests in select North American onshore renewable power assets, as well as 49% of Enbridge's interests in two German offshore wind projects. CPPIB's total commitment is about $2.25 billion. The assets include 14 long-term fully contracted operating wind and solar assets in four Canadian markets and two operating wind and solar assets in the United States.





$272 MILLION
Votorantim Energia, Brazil



US$391 MILLION
ReNew Power, India

$741 MILLION
Cordelio Power, Canada

$2.25 BILLION
Enbridge, Canada, Germany and United States
Photo courtesy of Enbridge, Inc.

Power & Renewables

The mandate of the Power & Renewables (P&R) group is to take advantage of opportunities as the global energy market transitions and global power demand grows – particularly for low-carbon energy alternatives. Electricity is the fastest growing form of energy consumption globally and renewables are becoming a more prominent part of the energy mix as deployment costs decrease and green technology increasingly becomes mainstream. Agriculture investments are also managed by the P&R group.

This group was created to help access attractive investments in the sector, since the industry's dynamics align closely with our competitive advantages – notably our scale, flexibility and long-term horizon. The group focuses on strategic opportunities and the ability to apply long-term investment horizons, with latitude to explore promising, less mature development and greenfield investments.

P&R collaborates with colleagues in both Infrastructure and Energy & Resources, as well as the Sustainable Investing team.

An interview with Bruce Hogg

Investing for the global energy transition

Bruce has been instrumental in helping CPPIB build a world-class infrastructure program since he joined the organization in 2007. He now heads CPPIB's Power & Renewables (P&R) group. Since its inception in 2017, P&R has been working to take advantage of emerging opportunities as global power demand grows and the energy market shifts towards lower-carbon alternatives.

Q: What is CPPIB's outlook for the Power & Renewables sector?

A: Globally, electricity is the fastest-growing form of energy consumption, with new investment in generation expected to total $10 trillion by 2040. It's long been presumed renewables are highly subsidized, which was the case when development costs were higher. But we've reached the point where renewable assets are getting built at relatively low costs and there is demand for them.

We track multiple investment themes. Now that renewable power investments are cost-competitive with coal and low-priced natural gas, many emerging markets can leapfrog into renewables, bypassing conventional energy production. With global solar power generation expected to double over the next seven years, and wind over the next 10, that cost-competitiveness will accelerate.

Our ability to do this will be helped along by disruptions, such as better storage systems – expected to grow fivefold in capacity over the next five years. What's more, as utility grids decentralize, demand management systems, smart meters and related technologies will gain traction. And, the industry will actively seek storage solutions to compensate for the fact that renewable power is generated intermittently – it's not always windy or sunny.

Q: How does CPPIB's portfolio benefit from a team dedicated specifically to Power & Renewables?

A: Having a dedicated team enables us to effectively match CPPIB's capital with global investment opportunities created by transitions to lower-carbon energy sources. Our approach will translate CPPIB's comparative advantages – which include scale and a long-term investment horizon – to achieve better risk-adjusted returns.

On top of that, benefits offered by increased focus on Power & Renewables include asset diversification and broader access to emerging markets, which is a significant long-term investment opportunity. Furthermore, a focused group builds capabilities and knowledge that go hand-in-hand with our Sustainable Investing group's global climate change initiatives.

We also anticipate significant opportunities for the Power & Renewables team to collaborate with investment teams across CPPIB. Synergies with the Energy & Resources group and knowledge sharing with Infrastructure and Direct Private Equity will build value across our Real Assets portfolio.

Q: What are CPPIB's current strategies on Power & Renewables in established and emerging markets?

A: Simply put: remain nimble. To generate the best portfolio, and risk-adjusted returns, we are flexible across geography, stage of investment (development, greenfield and operating), and technology type.

Within that simple mandate, we focus on transparent, reliable markets that offer clear economic frameworks and established power markets. While opportunities are screened globally, the team will focus on North America, Latin America, Europe, India and elsewhere in Asia.

We believe we can access higher risk-adjusted returns in growing subsectors, market dislocations and emerging markets, due to significant demand-driven generation growth. Within developed markets, we are more likely to focus on greenfield and other new developments, as well as opportunistic acquisitions of operating assets and newer subsectors – such as commercial and industrial applications.

Global and local market dynamics vary widely, so we work with top-tier financial and strategic partners, as well as management teams, to ensure we have specialized presence on the ground. This approach suits an investing environment in which returns are increasingly driven by the ability to develop, build and operate assets efficiently; and to access markets where there is less competition.

Maintaining a long-term outlook means our capital partners benefit from CPPIB's considerable flexibility. As we collaborate and grow with these companies, we watch for opportunities, without pressuring their management to invest.

Further, while we want to be on the leading edge of the build-outs of newer technologies, we focus on high-quality resources and commercialized technologies whose performance specifications have been proven.

CPPIB becomes the world's first pension fund to issue Green Bonds

In June 2018, CPPIB completed its inaugural issuance of green bonds, becoming the first pension fund in the world to do so. Investors bought $1.5 billion of the 10-year bond, which Bloomberg reported was a record at the time for a single green bond transaction in Canada.

Since their introduction in 2007, green bonds have become a mainstream way for companies, governments and other organizations to raise funds for projects with environmental benefits. The issuance of a green bond was a logical next step to our investment-focused approach to climate change. Capital was raised to provide additional funding as we pursue acquisitions of strong, long-term investments eligible under our Green Bond Framework. In the 12 months to June 30, 2018, we announced plans to invest more than $3 billion in renewable energy assets.

CPPIB established a cross-departmental Green Bond Committee, comprising representatives from Sustainable Investing, Cash and Liquidity (part of the Capital Markets and Factor Investing department), Power & Renewables, Legal, and Public Affairs and Communications. The Green Bond Committee determines which projects are eligible for green bond proceeds in the following categories:

Renewable energy (wind and solar)

› Acquisition, operation, maintenance and upgrades of wind and solar energy projects
› Efficiency improvements of wind and solar energy projects

Sustainable water and wastewater management

› Acquisition, operation and upgrades of projects that improve efficiency of water distribution and water recycling services
› Investments in tail water recovery systems, which collect run-off water from fields that is then recycled for agricultural production

Green Buildings (LEED Platinum certified)

› Direct investments in buildings certified as LEED Platinum over the 24-month lookback period and during the life of the bond

In addition, CPPIB engaged a world leader in providing second opinions on qualification of debt for green bond status, the Center for International Climate Research (CICERO), to evaluate the Green Bond Framework.

The Green Bond Committee met in July 2018 to make an initial decision on how the $1.5 billion in proceeds from the first bond sales would be allocated. It decided the proceeds will be invested in renewable energy assets chosen from among a series of acquisitions announced starting in December 2017. Additional details on these assets can be found on page 7. They include:

1. Wind parks acquired in a joint venture with Brazil's Votorantim Energia
2. Investment in India's ReNew Power, which owns wind, utility-scale solar and rooftop solar power-producing assets
3. A portfolio of Canadian wind and solar power projects acquired from NextEra Energy Partners
4. A 49% stake in Enbridge Inc.'s interests in select North American onshore renewable power assets (wind and solar), as well as 49% of Enbridge's interests in two German offshore wind projects

Further details on CPPIB's Green Bond and the use of proceeds can be found at: cppib.com/en/our-performance/investor-relations/

Task Force on Climate-related Financial Disclosures

The Financial Stability Board (FSB) is an international body created in the wake of the 2008 financial crisis to monitor financial system stability. It is currently chaired by Bank of England Governor Mark Carney and is affiliated with the G20. The FSB established the Task Force on Climate-related Financial Disclosures (Task Force) in 2015 to develop voluntary recommendations for more efficient and effective climate-related financial disclosures to promote more informed investment, credit and insurance underwriting decisions.

The FSB believes that more effective climate change disclosures will help reduce financial stability risks by avoiding an abrupt re-pricing of asset values as the impacts of climate change become clearer. We agree and this belief is reflected in our longstanding climate-related engagement work with companies.

The Task Force, which is chaired by Michael Bloomberg, includes capital providers, insurers, large global companies from a range of financial and non-financial sectors, accounting and consulting firms and credit rating agencies. Stephanie Leaist, CPPIB's Head of Sustainable Investing, is a member of the Task Force and has actively contributed to the development of the Task Force's recommendations by bringing an investor perspective to the work. CPPIB is one of only two global pension funds represented on the Task Force.

Since their release in June 2017, the Task Force's recommendations have had a growing impact on the global financial system's approach to and understanding of climate change, acting as a catalyst for transparency and action. As of June 2018, more than 290 companies, governments and organizations have pledged their support.

These recommendations are structured around four thematic areas: governance, strategy, risk management and metrics and targets. They provide a framework intended to help investors and others in the financial community better understand and assess climate-related risks and opportunities. CPPIB itself is aiming for full adoption of these recommendations by the end of fiscal 2021. In the following pages we provide an overview of steps we are taking to implement the recommendations:

Photos Courtesy of the Task Force on Climate-related Financial Disclosures.

Implementation of the Task Force's recommendations

Governance

Disclose the organization's governance around climate-related risks and opportunities.

a) Describe the board's oversight of climate-related risks and opportunities
b) Describe management's role in assessing and managing climate-related risks and opportunities

The Board oversees our efforts to understand and manage climate-related risks and opportunities. They receive updates about broad trends and specific investment-related developments via ongoing risk reporting and approve our overall risk appetite and risk policy, including the integration of ESG factors and climate change specifically.

Our CEO sets the tone and establishes the overall risk culture. The Head of Sustainable Investing provides the Board with updates on our sustainable investing activities (see page 9 in the full report for our Integrated Sustainable Investment Framework).

In July 2017, Neil Beaumont joined as CPPIB's Chief Financial and Risk Officer (CFRO). The CFRO has explicit accountability to oversee and enhance the risk management framework and to ensure it is appropriate given CPPIB's unique mandate and risk profile. The CFRO is working closely with the new ad hoc Risk Committee of the Board to advise management and the Board on the evolution of our risk management practices. He also sponsors CPPIB's climate change initiative, overseeing the Climate Change Steering Committee, which, along with the Climate Change Project Management Office, guides our climate-related efforts. (For more on the Climate Change Steering Committee and Climate Change Project Management Office (see page 5).

"Increasingly, climate change is showing significant physical, social, technological and economic impacts with implications for investment strategy and success. The Board is therefore very much engaged in the oversight of the organization's efforts to understand and manage these, including regular updates about broad trends and specific investment-related developments via ongoing enterprise risk management reporting."

– Dr. Heather Munroe-Blum, Chairperson

Strategy

Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy and financial planning, where such information is material.

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

Caption: CPPIB's Head of Sustainable Investing, Stephanie Leaist, is a member of the Task Force and attended its Plenary Meeting held in London, U.K. on February 13, 2018.

By taking climate change into account in our investment activities, we are better positioning ourselves to make appropriate investments over the long term. Not only does climate change present a complex array of new risks, it also presents attractive investment opportunities, including those found in the renewable energy sector. During fiscal 2018, the Climate Change Steering Committee led the development of a comprehensive and coordinated approach to climate change to consider both investment risks and opportunities across CPPIB. Elements of this approach include:

› Refining an energy transition outlook
› At the portfolio level, developing a top-down portfolio risk assessment including specific stress tests
› At the security selection level, developing a toolkit for investment teams to better assess climate change as part of future investment recommendations. We are creating a process for evaluation in addition to a catalogue of resources, data and research materials
› Reporting and communications, including our carbon footprint disclosure

This firm-wide approach comprises work streams led by individuals across CPPIB's investment departments, Total Portfolio Management, Finance, Analytics & Risk, Technology & Data and Public Affairs & Communications. This approach is overseen and directed by the Climate Change Steering Committee.

Risk Management

Disclose how the organization identifies, assesses and manages climate-related risks.

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

In 2017, CPPIB established the Climate Change Steering Committee, sponsored by the CFRO, to guide a multi-year effort to identify, assess and manage climate-related risks and opportunities at both the organizational and portfolio investment group levels (see page 5). Consistent with this, we added a longer-term risk model to our comprehensive suite of risk tools. This enhances our ability to measure investment risk across various time periods to better align with our investment horizon.

As part of our ongoing investing process, we have pressed large greenhouse gas emitters in oil and gas, utilities and other sectors for improved disclosure related to climate change risks. Additionally, CPPIB has a structured approach for the due diligence and monitoring of ESG risks, including climate-related ones, in our direct equity investments. Our Portfolio Value Creation group continues to work with our investment teams and external advisors to refine this approach (see page 20 in the full report).

Metrics and Targets

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities, where such information is material.

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

We consider key performance indicators for GHG emissions, water consumption and energy efficiency in our individual investments. We have developed a tool for measuring GHG emissions and other climate change-related data in our public equity portfolio (see pages 14–15). CPPIB believes this information can help inform our investment risk management process, and provide insights that will assist in the expansion of our measurement efforts beyond public equities in the future.

We continue to support the annual Climate Change Information Request by the CDP (formerly the Carbon Disclosure Project) (see page 3).

Carbon Footprint

The recommendations of the Task Force are widely recognized as the global standard for climate change disclosure. Building on our support of and commitment to the Task Force, CPPIB is disclosing the carbon footprint of our public equities portfolio for the first time in this year's Report on Sustainable Investing.

This disclosure represents part of our broader effort (see pages 12–13) to align with the Task Force recommendations and develop a better understanding of our exposure to climate change-related risks.

The Task Force has said there are challenges and limitations with carbon footprinting metrics and noted these should not necessarily be interpreted as risk metrics. At the same time, they have said they expect the release of this data to prompt important advancements. We agree with this position.

There is variability in the quality, completeness and timeliness of currently available greenhouse gas (GHG) emissions data. This variability affects the accuracy of the resulting metrics. We will continue to refine our methodology as improved data becomes available. Over time, we plan to expand our carbon disclosure beyond public equities to our broader portfolio.

CPPIB developed an in-house technology tool to produce the metrics below. The numbers reflect our carbon metrics as of June 30, 2018 and show metric tonnes of carbon dioxide equivalent (CO_2e)[1]. The formulas for metric tonnes calculations are based on Task Force recommendations.

METRIC[2]	CPPIB PUBLIC EQUITIES PORTFOLIO[3]	DESCRIPTION
TOTAL CARBON EMISSIONS	**15.6 million tonnes of CO_2e**	The absolute GHG emissions associated with a portfolio, expressed in tonnes CO_2e. This figure would typically rise as assets under management grow.
CARBON FOOTPRINT	**125 tonnes of CO_2e/$million invested**	Total carbon emissions for a portfolio normalized by the market value of the portfolio, expressed in tonnes CO_2e / $million invested.
CARBON INTENSITY	**220 tonnes of CO_2e/$million revenue**	Volume of carbon emissions per million dollars of revenue (carbon efficiency of a portfolio), expressed in tonnes CO_2e / $million revenue.

1 *Based on the most recent annual emission information (often from 2016 or 2017) available at June 30, 2018 and allocated based on CPPIB's June 30, 2018 holdings. Exchange rates applied are those as at the year-ends of the reported emissions and sales data, and as at June 30, 2018 for market capitalizations of holdings.*

2 *Issuers' Scope 1 and 2 GHG emissions are allocated to our portfolio based on an equity ownership approach, and the data is normalized based on the total in-scope portfolio value. Under the equity ownership approach, if an investor for example owns 5 percent of a company's total market capitalization, they own the same percentage of the company's emissions.*

3 *The portfolio within the calculation perimeter is all publicly traded equity holdings for which we have both underlying holdings data and S&P Trucost Ltd. (Trucost) carbon emissions data. This includes directly held equities, depository receipts, ETFs, equity futures, REITS and swaps (long and short positions). This excludes credit ETFs, options, rights and warrants. It also excludes any ETFs, swaps, REITS, and externally managed funds for which we have no look-through to the underlying exposure data. We have Trucost carbon emissions data for 93% ($125 billion) of our perimeter portfolio ($134 billion). We have reported on 34 per cent of CPPIB's total holdings.*

Our Methodology

For our initial carbon disclosure, we have opted to use Scope 1 and 2 GHG emissions. Scope 1 refers to direct GHG emissions from an organization's owned and controlled sources. Scope 2 refers to indirect emissions from the generation of purchased energy. The dataset for Scope 1 and 2 emissions is currently the most complete and robust available.

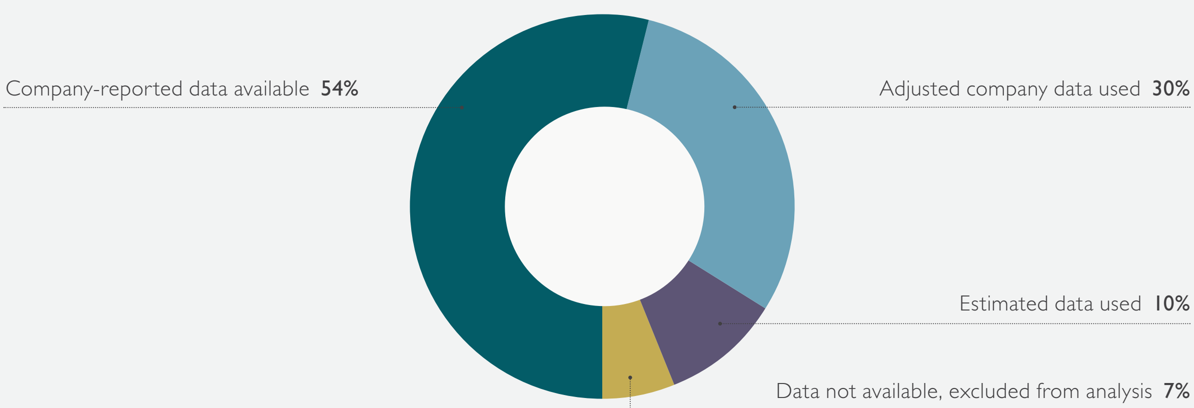
We have used emissions data provided by S&P Trucost Ltd. (Trucost[4]), a division of S&P Global that provides investment-grade carbon and environmental data to investors, companies and governments. While this data is the best we currently have available, it has limitations due to the use of differing GHG calculation methodologies by companies, incomplete reporting by some companies and the resulting use of partial company data to extrapolate or estimate historic emissions based on sector emissions performance.

The data we have presented, while the best available, is subject to inherent uncertainties and these uncertainties may be material.

We also recognize the assumptions made in applying the methodologies noted had a material impact on the resulting metrics. These include the use of a point-in-time approach to reporting on our portfolio, which may not fully reflect our holdings throughout the year, and the selection of the exchange rate when calculating carbon intensity. There is, as yet, no authoritative body of guidance or emerging standard of disclosure in relation to these assumptions. As a result, the comparability of the data presented here for our public equities portfolio to the carbon data disclosed for other portfolios is significantly reduced.

The chart below shows the different types of data available for our calculations (percentages based on value of holdings).

TYPES OF DATA AVAILABLE FOR CALCULATIONS



Total does not add up to 100% due to rounding

4 *Trucost, its affiliates, or its and their third-party data providers and licensors (collectively "Trucost Parties") do not guarantee the accuracy or completeness of the Information. Trucost Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Information. The Trucost parties make no warranties or representations, and, to the maximum extent permitted by law, each Trucost party hereby expressly disclaims all implied warranties, including warranties or merchantability and fitness for a particular purpose. Without limiting any of the foregoing and to the maximum extent permitted by law, in no event shall any of the Trucost parties have any liability regarding any of the information for direct, indirect, special, punitive, consequential (including lost profits) or any other damages even if notified of the possibility of such damages. The foregoing shall not exclude or limit any liability that may not by applicable law be excluded or limited.*