

CARBON DISCLOSURE PROJECT 2019



POWER FINANCIAL
CORPORATION

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CO Introduction

Introduction

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

Power Financial Corporation (hereinafter “Power Financial” or the “Corporation”) is a diversified international management and holding company with interests in companies in the financial services and other business sectors.

Financial Services (approx. 99% of assets)

Power Financial holds substantial interests in the financial services industry through its controlling interest in each of Great-West Lifeco Inc. and IGM Financial Inc. (our major publicly traded subsidiaries).

Great-West Lifeco is an international financial services holding company with interests in life insurance, health insurance, retirement and investment services, asset management and reinsurance businesses. The company has operations in Canada, the United States and Europe through The Great-West Life Assurance Company, London Life Insurance Company, The Canada Life Assurance Company, Irish Life Group Limited, Great-West Life & Annuity Insurance Company (Great-West Financial) and Putnam Investments, LLC.

IGM Financial is one of Canada’s premier personal financial services companies, and one of the country’s largest managers and distributors of mutual funds and other managed asset products, serving the financial needs of Canadians through multiple distinct businesses including Investors Group Inc. (IG Wealth Management), Mackenzie Financial Corporation (Mackenzie Investments) and Investment Planning Counsel Inc.

Together, Power Financial’s investments in the financial services sector represent approx. 99% of its consolidated assets.

Other Business Sectors (approx. 1% of assets)

Power Financial and the Frère Group of Belgium each hold a 50% interest in Parjointco N.V., which holds their interest in Pargesa Holding SA, a publicly traded Swiss company with indirect interests in companies based in Europe held through its publicly traded affiliated company, Groupe Bruxelles Lambert (GBL). Power Financial’s indirect economic interest in these companies is as follows: Imerys – mineral-based specialty solutions for industry (7.48%); adidas – design and distribution of sportswear (1.08%); Pernod Ricard – wines and spirits (1.04%); SGS SA – testing, inspection and certification (2.30%); LafargeHolcim – cement, aggregates and concrete (1.31%); Umicore, NV/SA – materials technology and recycling of precious metals (2.46%); GEA Group – supplier of equipment and project management for a wide range of processing industries primarily in the food and beverage sectors (1.18%); Ontex N.V. – disposable hygiene products (2.78%); and Parques Reunidos Servicios Centrales S.A. – operator of regional leisure parks (2.94%).

Power Financial has a deeply rooted tradition of acting in a responsible and ethical manner. We remain committed to continuing to reduce our impact on the environment, while working with our group companies as a supportive shareholder in connection with the energy and carbon management strategies they establish and implement.

Power Financial reports its carbon inventory using a financial control consolidation approach. Where financial control exists (as defined in Power Financial's financial statements), the Scope 1, 2 and 3 emissions reported by Great-West Lifeco and IGM Financial have been rolled up.

Throughout our response to the CDP, we reference the activities of our group companies, many of whom have filed their own response to the CDP questionnaire, including our major publicly traded subsidiaries, Great-West Lifeco and IGM Financial. Where applicable, please refer to these companies' CDP responses for more detailed information.

(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
From: 01/01/2018	To: 31/12/2018	No

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

Country/Region

Canada

Ireland

United Kingdom of Great Britain and Northern Ireland

United States of America

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

Currency

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 value should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Financial control

GOVERNANCE



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CI Governance

Board oversight

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

Yes

(C1.1a) Identify the position(s) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board-level committee	Responsibility for climate change has been assigned at the Board level to the Governance and Nominating Committee of the Board of Directors. The Committee is responsible for reviewing the Corporation's progress on Corporate Social Responsibility (CSR), which includes relevant climate change topics. Having Board oversight for risks and opportunities, including relevant climate-related issues, is important in ensuring we are proactively identifying, assessing, managing and monitoring such risks and opportunities across our diverse businesses.

(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 meetings	Monitoring implementation and performance of objectives	<p>Climate-related issues are an agenda item at the Governance and Nominating Committee meetings, where relevant, as part of its overall responsibility to monitor the implementation and maintenance by management of appropriate policies and controls to manage CSR risks and opportunities, including climate-related issues.</p> <p>Furthermore, as an active owner of the companies in which we invest, we strive to ensure that our governance practices preserve and enhance shareholder value in a manner consistent with our responsible management philosophy.</p> <p>By having our executives sit on the boards of our portfolio companies, we exercise active ownership through regular engagement with their senior management. This governance model, which has been developed over a long period of time, allows us to ensure that our investments are being managed in a manner consistent with our responsible management philosophy, enabling us to understand existing and potential CSR risks and opportunities, including climate-related issues. Our attendance at these Board meetings takes place quarterly, or more frequently, as required.</p>

(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	As important matters arise

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committee(s) lie, what their associated responsibilities are, and how climate-related issues are monitored.

The Corporation's President and Chief Executive Officer (CEO) provides strategic oversight on climate-related matters, including overseeing our progress on goals and targets, as well as our corporate disclosures on climate-related governance, risks and opportunities, strategy, management and performance through our CDP submission, annual report and website. Given the complexity and uncertainty of potential climate-related impacts on our business, we believe it is important for our President and CEO to provide strategic oversight on climate-related matters, to ensure we are effectively and proactively managing potential risks and opportunities

The Vice-President, General Counsel and Secretary is the appointed CSR Lead and has direct responsibility for overseeing efforts being taken to minimize the energy and carbon impacts at the holding company, as well as monitoring the progress being made by our group companies. The CSR Lead reports to the President and CEO on these matters, as well as to the Governance and Nominating Committee of the Board of Directors.

Employee incentives

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

Yes

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues.

Who is entitled to benefit from these incentives?	Type of incentives	Activity incentivized	Comment
Corporate executive team	Monetary reward	Emission reduction project	The Vice-President, General Counsel is the appointed CSR Lead and has direct responsibility for executing our CSR strategy, engaging with stakeholders and providing performance reports to the Governance and Nominating Committee, which includes climate change issues. A portion of the CSR Lead's performance incentives are tied to integrating CSR into our business, including our progress on our energy and carbon impacts.
Chief Financial Officer (CFO)	Recognition (non-monetary)	Emissions reduction target	Incentives for the management of climate change issues are provided by Great-West Lifeco to its Deputy CFO, whose annual objectives include oversight on the company's corporate social responsibility initiatives, including activities being undertaken to achieve their carbon reduction target.
Chief Risk Officer (CRO)	Monetary reward	Other: Climate change-related risk management	Incentives for the management of climate change issues are provided by Great-West Lifeco to its CRO who is compensated based on the effectiveness of the risk management oversight function, which includes providing independent risk oversight of all risk-taking activities and embedding a disciplined risk management culture across Great-West Lifeco.
Chief Investment Officer (CIO)	Monetary reward	Environmental criteria included in purchases	Incentives for the management of climate change issues are provided by Great-West Lifeco to its CIO who is compensated based on the value created through the company's investment portfolios. Ensuring environmental criteria, including climate-related risks and opportunities are considered in its investment decision-making related to acquisitions or divestments is part of this mandate, which could have an impact on value creation in investments.

Who is entitled to benefit from these incentives?	Type of incentives	Activity incentivized	Comment
Other: CSR Committee	Recognition (non-monetary)	Emissions reduction target	Incentives for the management of climate change issues are provided by Great-West Lifeco to its CSR committee members, whose annual objectives include executing on the company's CSR initiatives, including activities being undertaken to achieve their carbon reduction target.
Other: Assistant VP, Corporate Properties	Monetary reward	Emissions reduction target	Incentives for the management of climate change issues are provided by Great-West Lifeco to its Vice-President, Corporate Properties, whose variable compensation bonus structure includes executing on initiatives to achieve the company's reduction target.
Other: Corporate executive team	Monetary reward	Other: Climate change-related risks in the reinsurance business	Incentives for the management of climate change issues are provided by Great-West Lifeco to its leadership property catastrophe team, who are compensated for identifying optimal property catastrophe cover retrocession reinsurance opportunities within defined criteria and considering exposure to property risks, including physical climate parameters.
Facilities manager	Monetary reward	Emissions reduction project	Incentives for the management of climate change issues are provided by Great-West Lifeco to its corporate property managers at GWL Realty Advisors Inc. that manage the company's corporate head office and investment properties. They are rewarded through the company's annual bonus structure for progress on achieving BOMA BEST® certifications, which aligns with their energy and carbon reduction objectives and includes sustainable procurement considerations. Various property managers of Great-West Lifeco are also incentivized through their annual bonus structures for progress being made towards energy reduction targets at buildings and contributions to emissions inventories and reporting.

Who is entitled to benefit from these incentives?	Type of incentives	Activity incentivized	Comment
Executive officer	Monetary reward	Other: Sustainability strategy implementation	Incentives for the management of climate change issues are provided by IGM Financial to its Senior Vice-President and Treasurer and Vice-President, Finance and Corporate Responsibility. Their annual objectives include integrating climate-related considerations into the company's corporate responsibility strategy and initiatives as well as efforts to disclose and report carbon and energy management performance.
Other: Environment/ Sustainability Manager	Monetary reward	Other: Behaviour change related indicator	Incentives for the management of climate change issues are provided by IGM Financial to the Manager, Corporate Responsibility whose annual objectives include: integrating climate-related considerations into the company's corporate responsibility initiatives to reduce emissions, efforts to disclose and report carbon and energy management performance and plans to engage staff in behaviour changes supporting the company's energy and climate management plans.

RISKS AND OPPORTUNITIES



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C2 Risks and opportunities

Time horizons

(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.

Time horizon	From (years)	To (years)	Comment
Short-term	0	2	When considering risks and opportunities, we consider the time horizons of our subsidiaries Great-West Lifeco and IGM Financial (representing 99% of our assets). For example, Great-West Lifeco's strategy development function does not formally define time horizons however they generally consider short term to be 1-2 years. IGM Financial's short-term horizon aligns with its enterprise risk management framework which considers risk events that are likely to occur once in a 1- to 2-year period. We therefore report an inclusive short-term time horizon representing between 0 and 2 years.
Medium-term	2	5	When considering medium-term risks and opportunities, we consider the time horizons of our subsidiaries Great-West Lifeco and IGM Financial (representing 99% of our assets). For example, Great-West Lifeco's strategy development function does not formally define time horizons however they generally consider medium term to be 2-5 years. IGM Financial's medium-term horizon aligns with its enterprise risk management framework which considers risk events that are likely to occur once in a 2- to 5-year period. We therefore report an inclusive medium-term time horizon representing between 2 and 5 years.
Long-term	5	25	When considering long-term risks and opportunities, we consider the time horizons of our subsidiaries Great-West Lifeco and IGM Financial (representing 99% of our assets). For example, Great-West Lifeco's strategy development function does not formally define time horizons however they generally consider the long term to be beyond 5 years. IGM Financial's long-term horizon aligns with its enterprise risk management framework which considers risk events that are likely to occur once in a 5- to 20-year period. We therefore report an inclusive long-term time horizon representing between 5 and 25 years.

Management processes

(C2.2) Select the option that best describes how your organization’s processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

(C2.2a) Select the options that best describe your organization’s frequency and time horizon for identifying and assessing climate-related risks.

Frequency of monitoring	How far into the future are risks considered?	Comment
Six-monthly or more frequently	> 6 years	Climate change risks and opportunities are integrated into the Corporation’s company wide-risk management process. As part of this process, we also consider the risks and opportunities identified by our group companies. Climate change risks and opportunities, like other risks and opportunities, are monitored on an ongoing basis, as required. When relevant, these issues may be reviewed during internal senior management meetings as well as through our representation on the respective Boards of our group companies. For example, our subsidiary Great-West Lifeco conducts quarterly assessments of both current and emerging risks and opportunities, including those related to climate-related issues. Furthermore, our subsidiary IGM Financial conducts risk assessments formally on an annual basis, and more frequently when the company experiences changes to its business. Their executive-led Risk Management Committee meets quarterly to review enterprise-wide risks, including climate change.

(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

Process for Identifying Climate-Related Risks

Climate change risks and opportunities are integrated into the Corporation's company-wide risk management processes. Through our prudent risk management culture, we identify, assess, respond to, and monitor risks and opportunities related to a wide range of business issues and trends, including climate change, where relevant. As a diversified international management and holding company with interests in companies in the financial services and other business sectors, we recognize that sustainability trends such as climate change could potentially impact the companies in which we have made investments. We consider climate change risks and opportunities, where relevant, as part of our investment analysis process. Through this analysis, we typically focus on company-specific risks and opportunities, which can include at our subsidiaries' level: climate-related regulations; government incentives that support renewable energy markets; exposure to weather events that could impact our investments, corporate properties, information technology systems, and business continuity plans at office locations; and consumer needs for new products and services. These types of analyses can be further strengthened by our interactions with the senior management of our subsidiaries and portfolio companies.

Process for Assessing Climate-Related Risks

Once a trend is identified as representing a potential risk or opportunity, a more formal assessment is made by internal and/or external resources to evaluate the probability and materiality of the potential impact on the business. Based on this analysis, the results of our assessments are then presented to the executive team to determine the appropriate response measures.

Definition of a Substantive Financial Impact

At Power Financial, we assess a substantive financial impact as one that could materially impact the financials of our business. When defining parameters for a substantive financial impact we take into consideration the factors applied by our subsidiaries. For example, Great-West Lifeco defines its substantive financial impacts based on the magnitude and likelihood of the impact as well as the velocity of the risk. At IGM Financial, a risk with a substantive financial impact would be one that has a significant long-term impact on the company's revenue, capital or market capitalization. Long-term impact is defined as a 5- to 20-year time horizon. A significant long-term risk can also be defined as one with a significant impact on IGM Financial's reputation, a significant operational impact, or an enforcement action by a regulator or judicial authority.

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

Risk type	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	<p>Climate-related risks are integrated into our company-wide risk management processes, which take into consideration the risks of our subsidiaries and investments. Through this analysis, we review the following climate-related current regulatory risks at the subsidiary and investment level through our participation on their boards of directors: GHG regulations, carbon pricing, and building energy requirements.</p> <p>As part of our process, we consider climate-related current regulatory risks assessed by our major subsidiaries, Great-West Lifeco and IGM Financial, where a majority of our interests (approx. 99% of our assets) are held.</p> <p>Great-West Lifeco assesses climate-related regulations and carbon pricing impacts on its operations, owner-occupied and investment properties, and its investments. The company maintains a high-quality, diversified investment portfolio with sufficient liquidity to meet the demands of policyholder and financing obligations under normal and stressed conditions. For example, the total percentage of assets invested in sectors that could be exposed to carbon taxes and/or cap and trade schemes, such as the energy sector, transportation, and utilities, amounted to approximately 20% of invested bond assets in 2018. From a consolidated basis and considering the diversification of its portfolio, any such climate-related risks are not considered substantive to Great-West Lifeco's business.</p> <p>IGM Financial assesses its investment funds for exposure to material changes in GHG regulations which, if not managed effectively, could impact the performance of the funds, and company revenues. Diversification of assets under management and consideration of material environmental risks, including current climate regulations, is inherent in the company's business strategy. For example, of the total equity holdings for IG Wealth Management and Mackenzie Investments, 0.07% is invested in the coal and consumable fuel industry, which is an industry exposed to current climate-related regulations. Therefore, through the inherent diversification of IGM Financial's assets under management, the company has limited risk exposure to climate-related current regulations.</p> <p>Based on their reviews, and as disclosed in their respective CDP submissions, both companies do not consider climate-related current regulations to have a substantial impact on their business.</p>

Risk type	Relevance & inclusion	Please explain
Emerging regulation	Relevant, always included	<p>Climate-related risks are integrated into our company-wide risk management processes, which take into consideration the risks of our subsidiaries and investments. Through this analysis, we reviewed carbon market and pricing expectations at the subsidiary and investment level through our participation on their boards of directors.</p> <p>As part of our process, we consider the climate-related emerging regulatory risks assessed by our major subsidiaries, Great-West Lifeco and IGM Financial, where a majority of our interests (approx. 99% of our assets) are held.</p> <p>Great-West Lifeco continued to monitor the possible impacts of climate change regulatory landscape related to the acquisition and ongoing management of corporate and investment properties. From an investment standpoint, Great-West Lifeco's exposure to sectors and regions impacted by carbon pricing is further minimized through the diversification of its business and assets. In 2018, no individual sector, except for Government-issued bonds, accounted for more than 10% of invested assets. For example, together, the energy, transportation and utilities sectors, amounted to approximately 20% of invested bond assets in 2018.</p> <p>IGM Financial assesses its investment funds for exposure to emerging GHG regulations, which if not managed effectively, could impact the performance of the funds, and company revenue. Diversification of assets under management and consideration of material environmental risks, including emerging regulations, is inherent in the company's business strategy. For example, of the total equity holdings for IG Wealth Management and Mackenzie Investments, 0.07% is invested in the coal and consumable fuel industry, which is an industry exposed to emerging regulatory change. Therefore, through the inherent diversification of its assets under management, IGM Financial has limited risk exposure to emerging climate-related regulations.</p> <p>Based on their reviews, and as disclosed in their respective CDP submissions, both companies do not consider climate-related emerging regulations to have a substantial impact on their business.</p>

Risk type	Relevance & inclusion	Please explain
Technology	Relevant, always included	<p>Climate-related risks are integrated into our company-wide risk management processes, which take into consideration the risks of our subsidiaries and investments. Through this analysis, we review climate-related technology risks at the subsidiary and investment level through our participation on their boards of directors, including the impacts of technology developments such as the costs associated with transitioning to lower emission and smarter technologies, potential reduced demands for services, capital investments into technology developments, and costs to deploy new practices and processes.</p> <p>As part of our process, we consider the climate-related technology risks assessed by our major subsidiaries, Great-West Lifeco and IGM Financial, where a majority of our interests (approx. 99% of our assets) are held.</p> <p>Great-West Lifeco has been assessing costs and capital investments to transition towards smarter more efficient buildings that optimize energy efficiency and take advantage of big data and technological innovations within its properties management services at its subsidiary GWL Realty Advisors. The company determined the risks to be marginal given that the fee income from its real estate management services in 2018 represented less than 0.5% of Great-West Lifeco's overall net income.</p> <p>IGM Financial conducted a similar review of its corporate buildings and determined the risk to be marginal given that its energy costs represent less than 1% of its operating costs. The company also assessed climate-related technology risks in certain sectors in its investment funds, particularly within exposed industries such as coal which are facing pressure to transition to a low-carbon economy and has not identified any climate-related technology risks that could be substantive to its business. For example, of the total equity holdings for IG Wealth Management and Mackenzie Investments, the company determined that 0.07% is invested in the coal and consumable fuel industry, which is an industry exposed to technology risk. Therefore, IGM Financial has limited risk exposure to climate-related technology risks.</p> <p>Based on their reviews, and as disclosed in their respective CDP submissions, both companies do not consider climate-related technology risks to have a substantial impact on their business.</p>

Risk type	Relevance & inclusion	Please explain
Legal	Relevant, sometimes included	<p>Climate-related risks are integrated into our company-wide risk management processes, which take into consideration the risks of our subsidiaries and investments. Through this analysis, we review company-specific climate-related legal risks at the subsidiary and investment level through our participation on their boards of directors, specifically with respect to climate-related litigation lawsuits.</p> <p>As part of our process, we consider the climate-related legal risks assessed by our major subsidiaries, Great-West Lifeco and IGM Financial, where a majority of our interests (approx. 99% of our assets) are held.</p> <p>Great-West Lifeco reviewed legal risks within its business operations and its investment portfolio and determined limited exposure to the increase in climate-related litigation lawsuits given the diversification of its asset allocation, geographies, and sectors. In 2018, for instance, no individual sector accounted for more than 10% of the company's invested assets and the percentage of assets in the energy sector that could be exposed to litigation lawsuits amounted to less than 5% of invested assets in bonds or equities.</p> <p>IGM Financial assessed the potential for material climate-related litigation against specific sectors in their investment funds that may be highly exposed to climate change impacts, particularly in industries such as coal which have been subject to recent litigation. Despite this potential exposure, the impact of climate-related legal risk on its investment funds would not generate a substantive impact on the performance of the funds, and the company's revenues. For example, of the total equity holdings for IG Wealth Management and Mackenzie Investments, 0.07% is invested in the coal and consumable fuel industry, which is an industry exposed to legal risk.</p> <p>Based on their reviews and as disclosed in their respective CDP submissions, both companies do not consider climate-related legal risks to have a substantial impact on their business.</p>

Risk type	Relevance & inclusion	Please explain
Market	Relevant, always included	<p>Climate-related risks are integrated into our company-wide risk management processes, which take into consideration the risks of our subsidiaries and investments. Through this analysis, we review company-specific climate-related market risks at the subsidiary and investment level through our participation on their boards of directors, including with respect to fluctuating socio-economic conditions that may result from society's exposure to weather-related losses and the demand for products that integrate climate-related factors.</p> <p>As part of our process, we consider climate-related market risks assessed by our major subsidiaries, Great-West Lifeco and IGM Financial, where a majority of our interests (approx. 99% of our assets) are held.</p> <p>Great-West Lifeco assessed fluctuating socio-economic conditions from society's exposure to weather-related losses and concluded that lapse rates from extreme weather events, such as Hurricane Katrina, were not severe and had limited impact on insurance affordability and customer retention rates. Great-West Lifeco also considered the potential for stranded assets that may arise from climate-related market trends. For example, the company reviewed the extent to which some of its investments may be impacted by the increasing demand for electric vehicles. Given the diversification of Great-West Lifeco's investment strategy, the potential for stranded assets was not deemed substantive to its overall business.</p> <p>IGM Financial determined that the risk of not being able to meet market demand for products that integrate climate-related factors is not currently substantive to its business. For example, the company offers investment funds with specific environmental and social mandates which have had minimal demand to date and only represented 0.3% of the IGM Financial's assets under management at December 31, 2018 (0.3% in 2017). Therefore, the company has sufficient supply and limited risk exposure of not meeting current market demand for specific climate-related products and are well positioned to meet future demand.</p> <p>Based on their reviews, and as disclosed in their respective CDP submissions, both companies do not consider climate-related market risks to have a substantial impact on their business.</p>

Risk type	Relevance & inclusion	Please explain
Reputation	Relevant, always included	<p>Climate-related risks are integrated into our company-wide risk management processes, which take into consideration the risks of our subsidiaries and investments. Through this analysis, we review company-specific climate-related reputation risks at the subsidiary and investment level through our participation on their boards of directors, including with respect to increasing stakeholder requests for climate disclosure and the possible impact on our reputation from stakeholders for not effectively demonstrating how climate change risks and opportunities are managed.</p> <p>As part of our process, we consider climate-related reputation risks assessed by our major subsidiaries, Great-West Lifeco and IGM Financial, where a majority of our interests (approx. 99% of our assets) are held.</p> <p>Great-West Lifeco assessed the increase in investor interest on environmental, social and governance factors, which includes responding to and mitigating climate risks. As a result, the company has been strengthening the transparency and credibility of the information it published publicly on climate-related issues, including with respect to governance, risks, opportunities and performance. However, when considered generally in the context of the overall business and other types of reputational risks, Great-West Lifeco does not consider climate-related reputational risks to have a substantive impact on its business, revenues or expenditures.</p> <p>IGM Financial conducted a similar review and determined that climate-related reputational risks were not substantive when compared to other reputational risks such as client privacy and product/service compliance. Furthermore, in 2018, IGM Financial launched its Mackenzie Environmental Equity Fund, which has seen low client demand to date (fund size at December 31, 2018 was 0.03% of assets under management), therefore the company has sufficient supply and limited reputation risk from clients that it is not meeting their climate-specific product needs.</p> <p>Based on their reviews, and as disclosed in their respective CDP submissions, both companies do not consider climate-related reputational risks to have a substantial impact on their business.</p>

Risk type	Relevance & inclusion	Please explain
Acute physical	Relevant, always included	<p>Climate-related risks are integrated into our company-wide risk management processes, which take into consideration the risks of our subsidiaries and investments. Through this analysis, we review company-specific climate-related acute physical risks at the subsidiary and investment level through our participation on their boards of directors, including extreme weather events.</p> <p>As part of our process, we consider climate-related acute physical risks assessed by our major subsidiaries, Great-West Lifeco and IGM Financial, where a majority of our interests (approx. 99% of our assets) are held.</p> <p>Great-West Lifeco considered exposure to increased severity of extreme weather events in its reinsurance business, based on worst-case scenarios (peak peril modeling) and concluded these events would not result in a substantive impact to their business. For example, claims related to losses from hurricanes Harvey, Irma, and Maria combined resulted in established reserves of \$175 million, which were not considered to be substantive to its business or an inherent risk to its overall earnings potential. Geographic limits for the company's mortgage portfolio do not exceed 8% for any region, thereby decreasing the risk. The company also considered extreme weather risks in its investments. In 2018, it made some divestments in its portfolio due to possible wildfire risks. When considered in the context of the overall business and diversification of its investment assets, exposure to acute physical events are not considered a substantive inherent risk by Great-West Lifeco.</p> <p>IGM Financial reviewed IG Wealth Management's mortgage portfolio for risks driven by extreme weather events which, if not addressed proactively, could impact the financial performance of the business and determined it was not substantive given its diversification limits. For instance, in 2019, IGM Financial's mortgage portfolio contained approx. 275 properties in Eastern Canada with potential exposure to loss from flooding from extreme weather events. Of these, less than 10% had impact, representing 0.04% of total mortgages under administration, and the company estimates associated losses to be zero.</p> <p>Based on their reviews, and as disclosed in their respective CDP submissions, both companies do not consider climate-related acute physical risks to have a substantial impact on their business.</p>

Risk type	Relevance & inclusion	Please explain
Chronic physical	Relevant, always included	<p>Climate-related risks are integrated into our company-wide risk management processes, which take into consideration the risks of our subsidiaries and investments. Through this analysis, we review company-specific climate-related chronic physical risks at the subsidiary and investment level through our participation on their boards of directors, including with respect to changes in precipitation patterns, extreme variability in weather patterns, rising mean temperatures and rising sea levels.</p> <p>As part of our process, we consider climate-related chronic physical risks assessed by our major subsidiaries, Great-West Lifeco and IGM Financial, where a majority of our interests (approx. 99% of our assets) are held.</p> <p>Great-West Lifeco has not identified substantive risks from changes in physical climate parameters on both morbidity and mortality rates in its life and health insurance businesses. The company diversifies its morbidity and mortality risks by limiting concentrations in any one specific region or geography. Over the past few years, the company has not experienced notable changes in insurance claims due to climate-related health impacts. From an equities fund management and investment perspective, Putnam Investments has highlighted climate change-related physical risks on select legacy assets, noting that those risks are already beginning to impact current valuations and the discount rate used in analysis for the cost of capital of affected companies. However, when considered in the context of Great-West Lifeco's overall business globally, chronic physical climate risk exposures are currently not considered to be substantive.</p> <p>IGM Financial reviewed IG Wealth Management's mortgage portfolio for risks driven by extreme weather events and determined it was not substantive given its inherent diversification investment strategy. For instance, in 2019, IGM Financial's mortgage portfolio contained approx. 275 properties in Eastern Canada with potential exposure to loss from flooding from extreme weather events. Of these, less than 10% had impact, representing 0.04% of total mortgages under administration, and the company estimates associated losses to be zero.</p> <p>Based on their reviews, and as disclosed in their respective CDP submissions, both companies do not consider climate-related chronic physical risks to have a substantial impact on their business.</p>

Risk type	Relevance & inclusion	Please explain
Upstream	Relevant, sometimes included	<p>Climate-related risks are integrated into our company-wide risk management processes, which take into consideration the risks of our subsidiaries and investments. Through this analysis, we review company-specific climate-related upstream risks at the subsidiary and investment level through our participation on their boards of directors, including with respect to operating costs associated with sourcing low-carbon products from third parties in our supply chain.</p> <p>As part of our process, we consider climate-related upstream risks assessed by our major subsidiaries, Great-West Lifeco and IGM Financial, where a majority of our interests (approx. 99% of our assets) are held.</p> <p>Great-West Lifeco through its subsidiary GWL Realty Advisors is committed to reducing the environmental impacts that could occur from the services and products procured from third-party contractors and suppliers. The company's Supplier Risk Management Policy includes 'Sustainability' as one of the specific risk principles, which covers climate-related issues. The company assessed the potential costs associated with sourcing cleaner, renewable energy sources and sustainable materials to ensure the efficiency and climate resilience of its assets under management. While important, these expenditures are not substantive to the company's overall business, given that fee income and related expenses represent less than 1% of Great-West Lifeco's overall net income.</p> <p>IGM Financial reviewed the impact of increased costs from utility suppliers, which it determined was not substantive given that energy costs represent less than 1% of their operating costs.</p> <p>Based on their reviews, and as disclosed in their respective CDP submissions, both companies do not consider climate-related upstream risks to have a substantial impact on their business.</p>

Risk type	Relevance & inclusion	Please explain
Downstream	Relevant, always included	<p>Climate-related risks are integrated into our company-wide risk management processes, which take into consideration the risks of our subsidiaries and investments. Through this analysis, we review company-specific climate-related downstream risks at the subsidiary and investment level through our participation on their boards of directors, including with respect to changing customer demands for products and services, as well as impacts on our investments.</p> <p>As part of our process, we consider climate-related downstream risks assessed by our major subsidiaries, Great-West Lifeco and IGM Financial, where a majority of our interests (approx. 99% of our assets) are held.</p> <p>Great-West Lifeco assessed the risks of not using low-carbon products in its business offering (such as electronic applications and eClaim services) and providing its clients with responsible investment options that include environmental and climate-related screening criteria. When considered in the context of its overall business, these risks were not substantive. In 2018, for instance, the fee income from Great-West Lifeco's responsible investment options represented less than 1% of its overall net income.</p> <p>IGM Financial offers mortgage products that provide mortgage insurance inducements for energy efficient homes. The current use of this program has been extremely low. The company also offers mutual funds with specific environmental and social mandates, including one of Canada's largest Socially Responsible Investment (SRI) funds – the Investors Summa SRI Fund, and four new Mackenzie Investments funds launched in 2017/2018 with ESG-specific mandates. These products have had minimal demand to date and only represented 0.3% of the company's assets under management at December 31, 2018. Therefore, IGM Financial has sufficient supply and the risk of not meeting client demand for climate-related investment and mortgage products is not substantive.</p> <p>Based on their reviews, and as disclosed in their respective CDP submissions, both companies do not consider climate-related downstream risks to have a substantial impact on their business.</p>

(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

Description of a process for managing climate-related risks

Risk management is conducted by our executive officers, with the oversight of the Board of Directors. Specifically, certain officers of Power Financial are members of the boards and committees of the boards of our operating companies and therefore, in their role as directors, participate in understanding potential risks at the operating companies. Information on climate-related risks impacting our business is compiled through the investment analysis process and through regular interactions with the senior management of our subsidiaries and portfolio companies, who are ultimately responsible for the risk oversight function at their respective companies. For example, the oversight and risk management function at Great-West Lifeco is under the mandate of the Risk Committee of the Board of Directors and under the Board of Directors at IGM Financial.

At the operating company level, the respective executive teams are informed of risk identification, assessment and management through their enterprise risk management frameworks whereby risks are prioritized and appropriate policies and controls are established to ensure effective management.

Case examples of how the process applies to a physical risk and transition risk

An example of a physical climate-related risk assessment relates to Great-West Lifeco's reinsurance business. On an annual basis, the company conducts scenario modelling on climate-related events and the impact on its reinsurance business. Using robust weather models, they model peak perils at the worst locations to assess the likelihood, severity and velocity of extreme weather events. The information from these scenario models enables them to assess how much of a loss they will take, which in turn informs pricing models. Based on the modelling of two worst-case scenarios, Great-West Lifeco determined it would not have a substantive impact on its business. For example, claims related to losses from hurricanes Harvey, Irma and Maria combined resulted in Great-West Lifeco establishing reserves of \$175 million, which were not considered to be substantive to the overall business. Furthermore, they manage these inherently lower risks by setting contractual limits and cap exposure on the portfolio, and by ensuring they renegotiate reinsurance contracts annually so that they can revisit their risk exposures and limits on an ongoing basis.

As an example of a transition risk, IGM Financial assessed the impact of not transitioning its buildings to smarter and more efficient technologies to optimize energy efficiency. Given its relatively small building footprint and the fact that energy costs represent less than 1% of operating costs, these risks were not considered substantive to the business.

Description of a process for managing climate-related opportunities

The management of opportunities in Power Financial's business is conducted by our executive officers, with the oversight of the Board of Directors. Information on climate-related opportunities impacting our business is compiled through reviews of market trends, investment analysis processes and through regular interactions with the senior management of our subsidiaries and portfolio companies. Specifically, certain officers of Power Financial are members of the boards and committees of the boards of our operating companies and therefore, in their role as directors, participate in understanding potential opportunities at the operating companies. It is important to note that our operating companies are responsible for managing climate-related opportunities within their respective companies.

Case example of managing a climate-related opportunity

An example of a climate-related opportunity has been the trend we have identified of continued growth in the sustainable and renewable energy markets, driven in part by favourable government policies and increasing incentives. As a result, in 2018, Great-West Lifeco invested over \$2 billion in wind, solar, and other renewable energy projects and the company's public bonds group made purchases of Ontario and Québec's green bonds.

Risk disclosure

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

No

(C2.3b) Why do you not consider your organization to be exposed to climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Primary reason	Please explain
<p>Risks exist, but none with potential to have a substantive financial or strategic impact on the business</p>	<p>We assessed climate risk exposure, focusing on our subsidiaries Great-West Lifeco and IGM Financial, which represent a majority of our interests (99% of our assets). We compiled information through engagements with the senior management of our subsidiaries and portfolio companies, and through the investment analysis process, where relevant. In 2018, we did not identify climate-related risks with substantive impacts on our business.</p> <p>Both Great-West Lifeco and IGM Financial disclosed in their respective CDP submissions that physical and regulatory risks would not substantively impact their investments, property, life and health insurance, loans and mortgages. Both companies carry diverse products and services, limiting exposure to any one particular sector, market or geography. For example:</p> <ul style="list-style-type: none"> • Claims related to losses from hurricanes Harvey, Irma, and Maria combined resulted in established reserves of \$175 million by Great-West Lifeco, which was not considered to be substantive to the business. • IGM Financial reviewed its mortgage portfolio and determined that approx. 275 properties in Eastern Canada had potential exposure to losses from flooding from extreme weather events. Of these, less than 10% were impacted, representing 0.04% of total mortgages under administration, and the company estimated associated losses to be zero. • In 2018, Great-West Lifeco's fixed income (bond) assets (representing 71% of total invested assets) that were invested in sectors potentially exposed to climate-related regulations, such as the energy, transportation, and utilities sectors, represented approx. 20% of these invested bond assets. While important, these risks are not substantive to the business given its inherent diversification. • IGM Financial assessed the potential for material climate-related litigation against specific sectors in the company's funds that may be exposed to climate change impacts, such as coal which has been subject to recent litigation. Despite this potential exposure, the impact of climate-related legal risk on its investment funds would not generate a substantive impact on their performance, and the company's revenues. For example, of the total equity holdings for IG Wealth Management and Mackenzie Investments, 0.07% is invested in the coal and consumable fuel industry. Therefore, they have limited exposure to climate-related legal risk.

Opportunity disclosure

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

No

(C2.4b) Why do you not consider your organization to have climate-related opportunities?

Primary reason	Please explain
<p>Opportunities exist, but none with the potential to have a substantive financial or strategic impact on the business</p>	<p>We assessed climate-related opportunities in our business through engagement with the senior management at our subsidiaries and portfolio companies and through the investment analysis process, where relevant. In 2018, we did not identify climate-related opportunities that could substantively impact our business.</p> <p>Great-West Lifeco and IGM Financial, where we have a majority of our interests (99% of our assets), disclosed in their respective CDP submissions that they did not identify climate-related opportunities to be substantive to their businesses. With respect to green markets, Great-West Lifeco has taken advantage of investments in the renewable energy market, having invested \$2 billion in wind, solar and other renewable energy projects in 2018. While important, these investments are not substantive given that less than 1.2% of Great-West Lifeco's asset value is tied to investments in low-carbon renewable energy projects/markets. Additionally, the company also uses low carbon products such as electronic and eClaim services and provides investment solutions with specific ESG (including climate change) mandates, such as Putnam Investments' Sustainable Future Fund and Sustainable Leaders Fund. The total value of these two funds with mandates that include ESG criteria represents approximately US\$5 billion.</p> <p>In 2017-2018, IGM Financial subsidiary Mackenzie Investments launched four new socially responsible and impact funds: the Global Sustainability and Impact Balanced Fund, which invests sustainably and engages companies in promoting climate-friendly behaviour, and the Mackenzie Global Environmental Equity Fund, which invests in the energy transition from fossil-fuels to renewable power. These products, along with the IG Summa SRI Fund, are also available to IG Wealth Management clients. While these products are important, demand has been limited, representing 0.3% of total assets under management, which is not substantive to IGM Financial's business.</p>

Business strategy

(C3.1) Are climate-related issues integrated into your business strategy?

Yes

(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?

Yes, qualitative and quantitative

(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.

How business objectives and strategy have been influenced by climate-related issues

Our group's business objectives and strategy are informed by a broad range of information, including climate-related issues relevant to the effective functioning of our businesses and provision of their products and services. Climate-related issues that have influenced our group's business objectives and strategy cover both internal and external factors.

For example, over the past few years, the increase in incentives and financing from governments has influenced Great-West Lifeco's growth strategy into cleaner energy investments in North America. As a result, the company is now investing more to support the transition to a low carbon economy.

Explanation of whether the business strategy is linked to an emission or energy reduction target

Our business strategy is linked to our emission and energy reduction targets. For example, through their carbon and energy management strategy, our group companies are investing in building project upgrades and retrofits that reduce our energy and carbon impacts, including through investments in LED lighting retrofits, building equipment retrofits, data centre optimization, and green building upgrades and certifications. Together, this business strategy is enabling us to meet our greenhouse gas (GHG) reduction targets: Power Financial's Scope 3 (Upstream) target of 8% by 2020; Great-West Lifeco's Scope 1 and 2 targets for its Canadian properties of 27.3% by 2025 and 50.4% by 2036; and IGM Financial's Scope 1 and 2 targets of 40% by 2020 and 50% by 2036.

Example of the most substantial business decision made as a result of integrating climate-related issues

A number of important business decisions were made by our group companies in 2018 as a result of integrating climate-related issues. In reviewing these business decisions, it is important to note that they are not considered substantive to the business as explained in our response to C2.3b above. The important business decisions are described below.

Great-West Lifeco is growing its casualty and property reinsurance business due to increasing demand driven by economic and risk modelling factors. Their short-term strategy covering the current time and the next three years has been influenced by the demand for property catastrophe retrocession opportunities. For example, economic growth driving the number of houses in areas prone to single events (e.g. hurricanes), changes in industry modeled location, occurrence and severity of windstorms, and availability of capital to support these risks have influenced the growth of our property and casualty reinsurance business. Another relatively substantial business decision influenced by climate change, was investment decisions to support the transition to a low carbon economy. The aspect of climate change that influenced the decision to invest in the low carbon economy was the increase in incentives and financing from governments. In 2018, Great-West Lifeco invested over \$2 billion in wind, solar and other renewable energy projects, and the company's public bonds group made purchases of Ontario and Québec's green bonds. While important, these investments are not substantive given that less than 1.2% of invested assets are tied to investments in low-carbon renewable energy markets and green bonds.

IGM Financial expanded Mackenzie Investments' suite of socially responsible and impact funds, including the launch of the Mackenzie Global Sustainability and Impact Balanced Fund. This fund invests in a sustainable way and engages with companies to promote climate-friendly behaviour. This decision is consistent with the company's strategy to offer a broad number of investment options responding to client demand.

(C3.1d) Provide details of your organization’s use of climate-related scenario analysis.

Climate-related scenarios	Details
<p>Other: Great-West Lifeco uses modelling for the Property & Catastrophe portfolio in the Reinsurance department</p>	<p><u>Climate scenario analysis overview and context</u></p> <p>On an annual basis, our subsidiary Great-West Lifeco conducts scenario modelling on climate-related events and the impact on its property and catastrophe reinsurance business. Using robust weather models provided by a third party, Great-West Lifeco models peak perils to assess the likelihood, severity and velocity of extreme weather events, including windstorms, hurricanes and cyclones. The information is used to assess how much of a loss the company would take, which in turn informs its pricing models. A description of the model is presented below.</p> <p><u>Description and relevance of the time horizon</u></p> <p>The third-party model has the capabilities to provide long-term climate event horizons based on specific modelling solutions. For Great-West Lifeco, typically a one-year time horizon is considered relevant for its property & catastrophe contracts. This is due to the fact that the company manages these inherently lower risks of its reinsurance business by setting contractual limits and cap exposure on the portfolio, and by ensuring it renegotiates its reinsurance contracts annually so that it can revisit its risk exposure and limits on an ongoing basis.</p> <p><u>Details of the methodology used</u></p> <p>Inputs: The third-party model is derived from best-in-class models built in partnership with the world’s leading carriers. The inputs to the models include the frequency and severity of extreme weather events of clients’ underlying exposure to climate-related events, including windstorms, hurricanes and cyclones.</p> <p>Assumptions: The assumptions applied are based on various data sources to determine the risk location, exposure, and hazards. The assumptions are based on the Poisson distribution frequency that expresses the reasonable assumption of the probability of a given number of extreme weather events occurring within a fixed period of time, within a specific area.</p> <p>Analytical methods: Great-West Lifeco applies the Monte Carlo simulation methodology to clients’ exposure files.</p> <p>Changes from the reference scenario considered: Based on Great-West Lifeco’s reinsurance business needs, the reference scenario applies over the period of the year in question, which was last done for the period of 2018.</p> <p><u>The area of the organization considered for the scenario analysis</u></p> <p>The scenario analysis is considered for Great-West Lifeco’s Property and Catastrophe portfolio, which is used by the Great-West Lifeco Reinsurance Division.</p>

Climate-related scenarios	Details
	<p><u>Company specific description of the results of conducting scenario analysis</u></p> <p>Based on internal modelling of two worst-case scenarios, Great-West Lifeco determined extreme weather events would not result in a substantive impact on its reinsurance business. Specifically, for Great-West Lifeco's reinsurance business, it was determined that the location, occurrence and severity of extreme weather events (specifically windstorms, hurricanes and cyclones) in the areas of its reinsurance business were coverable by the allocated available capital.</p> <p><u>Description of how the results of the scenario informed and directly influenced the business objectives and strategy</u></p> <p>Based on the internal modelling of two worst-case scenarios, Great-West Lifeco determined that climate-related events would not result in a substantive impact on its business. For example, claims related to losses from hurricanes Harvey, Irma and Maria combined resulted in established reserves of \$175 million, which were not considered to have a substantive impact on the overall business.</p>

TARGETS AND PERFORMANCE



POWER FINANCIAL
CORPORATION

CARBON
DISCLOSURE
PROJECT
2019



C4 Targets and performance

Targets

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

Absolute target

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

Target reference number	Scope	% emissions in scope	Targeted % reduction from base year	Base year	Start year	Base year emissions covered by target (metric tonnes CO ₂ e)	Target year	Is this a science-based target?	% of target achieved	Target status	Please explain
Abs1 PFC	Scope 3 (upstream)	0.04%	8.0%	2011	2012	61.97	2020	No, but we anticipate setting one in the next 2 years	100%	Achieved	This target applies to the Scope 3 emissions relating to the consumption of electricity and natural gas at Power Financial's leased head office properties. The reduction achieved to date was mainly driven by various emission reduction activities. While the scope of this target is limited (0.04% of emissions in Scope), we continue to work towards reducing the footprint of our emissions at our corporate office.

Target reference number	Scope	% emissions in scope	Targeted % reduction from base year	Base year	Start year	Base year emissions covered by target (metric tonnes CO ₂ e)	Target year	Is this a science-based target?	% of target achieved	Target status	Please explain
Abs2 Lifeco	Scope 1+2 (location-based)	36.10%	27.3%	2013	2014	21,972	2025	No, but we anticipate setting one in the next 2 years	50.38%	Underway	This target (2013-2025) applies to Scope 1 and 2 emissions for Great-West Lifeco's owner-occupied and investment properties in Canada. The target excludes Scope 1 + 2 GHG emissions associated with corporate jet fuel use, backup generator diesel fuel use, and refrigerants. The target includes emissions associated with property-level electricity, natural gas, and steam consumption at its corporate head office and investment properties. The reductions achieved to-date (50.38% towards target completion) are in part due to emissions reduction activities (e.g. energy efficiency focused retrofits and behavioural changes) at Great-West Lifeco's corporate head office and investment properties in scope for this target.
Abs3 Lifeco	Scope 1+2 (location-based)	36.10%	50.4%	2013	2014	21,972	2036	No, but we anticipate setting one in the next 2 years	27.29%	Underway	This target (2013-2036) applies to Scope 1 and 2 emissions for Great-West Lifeco's owner-occupied and investment properties in Canada. The target excludes Scope 1 + 2 GHG emissions associated with corporate jet fuel use, backup generator diesel fuel use, and refrigerants. The target includes emissions associated with property-level electricity, natural gas, and steam consumption at its corporate head office and investment properties. The reductions achieved to-date (27.29% towards target completion) are in part due to emissions reduction activities (e.g. energy efficiency focused retrofits and behavioural changes) at Great-West Lifeco's corporate head office and investment properties in scope for this target.

Target reference number	Scope	% emissions in scope	Targeted % reduction from base year	Base year	Start year	Base year emissions covered by target (metric tonnes CO ₂ e)	Target year	Is this a science-based target?	% of target achieved	Target status	Please explain
Abs4 IGM	Scope 1+2 (market-based)	3.83%	40%	2013	2015	2,330	2020	No, but we anticipate setting one in the next 2 years	100%	Achieved	This target (2013-2020) applies to IGM Financial's Scope 1 and 2 emissions in Canada, which includes property-level electricity, natural gas, jet fuel, back-up diesel, and refrigerants consumption at its corporate head office. Once the Science Based Organization methodology for financial services companies is established, IGM Financial will be exploring the application to its business.
Abs5 IGM	Scope 1+2 (market-based)	3.83%	50%	2013	2015	2,330	2036	No, but we anticipate setting one in the next 2 years	100%	Achieved	This target (2013-2036) applies to IGM Financial's Scope 1 and 2 emissions in Canada, which includes property-level electricity, natural gas, jet fuel, back-up diesel, and refrigerants consumption at its corporate head office. Once the Science Based Organization methodology for financial services companies is established, IGM Financial will be exploring the application to its business.

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

Target	KPI - Metric numerator	KPI - Metric denominator (intensity targets only)	Base year	Start year	Target year	KPI in baseline year	KPI in target year	% achieved in reporting year	Target status	Please explain	Part of emissions target	Is this target part of an overarching initiative?
Renewable electricity consumption	IGM Financial's target is for at least 80% of the natural gas utilized at its owned property to be renewable. This is equal to 4,689 megawatt hours.	Not relevant as this is an absolute target	2013	2015	2020	0	4,689	100%	Achieved	Our subsidiary IGM Financial is accomplishing this goal through an agreement with Bullfrog Power to purchase green natural gas from a unique methane-capture project situated on a Canadian landfill. The gas is injected into the Canada-wide pipeline system and IGM Financial receives a renewable energy credit. This process is audited and verified annually by Deloitte. Not only does this partnership significantly reduce the company's greenhouse gas emissions footprint, it supports the development of the green energy industry across Canada.	Since IGM Financial's owned office building is located in Manitoba, hydro-electricity is almost zero emissions, therefore natural gas is the main focus of this target to reduce Scope 1 and 2 GHG emissions by 40% by 2020 and 50% by 2036.	Other: Voluntary reduction initiative

Emissions reduction initiatives

(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 projects at each stage of development, and for those in the implementation stages, the estimated CO₂e savings.

Stage of development	Number of initiatives	Total estimated annual CO ₂ e savings in metric tonnes CO ₂ e (only for rows marked *)
Under investigation	24	
To be implemented*	16	1,616
Implementation commenced*	2	87
Implemented*	7	459
Not to be implemented	2	

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

Initiative type	Description of initiative	Estimated annual CO ₂ e savings (metric tonnes CO ₂ e)	Scope	Voluntary/Mandatory	Annual monetary savings (unit currency, as specified in C0.4)	Investment required (unit currency, as specified in C0.4)	Payback period	Estimated lifetime of the initiative	Comment
Process emission reductions	Changes in operations	12	Scope 3	Voluntary	0	\$19,200	No payback	Ongoing	Addition of compost facilities and systems throughout IGM Financial's head office building
Other	Leased space consolidation at IGM Financial	317	Scope 3	Voluntary	0	0	No payback	Ongoing	More efficient use of IGM Financial's leased office space across Canada, including transition to higher-quality facilities
Energy efficiency: Building services	Lighting	0.02	Scope 2 (location-based)	Voluntary	\$2,500	\$25,000	4-10 years	Ongoing	IGM Financial will convert atrium mercury vapour pot-lights to LED
Energy efficiency: Building services	HVAC	108	Scope 1	Voluntary	\$12,000	\$36,000	1-3 years	3-5 years	Heat exchanger maintenance, cleaning, and optimization at Great-West Lifeco
Energy efficiency: Building services	Motors and drives	17	Scope 2 (location-based)	Voluntary	\$1,200	\$910	<1 year	3-5 years	Fan speed optimization (vent unit), shut offs (parkade), and VSD optimization at Great-West Lifeco
Energy efficiency: Building services	Building controls	5	Scope 2 (location-based)	Voluntary	\$600	\$1,200	1-3 years	3-5 years	Zoning and isolation of HVAC for small data centre and print shop at Great-West Lifeco

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

Method	Comment
Other	As part of our commitment to continuously reduce our limited carbon and energy impacts, our parent company, Power Corporation, conducts a number of building upgrades and retrofits annually. For example, in 2018, the water pumps at Power Financial's leased offices were replaced for more energy efficient ones.
Dedicated budget for energy efficiency	Great-West Lifeco has a dedicated budget for energy efficiency projects. Each year, an investigation is made into possible energy efficiency projects. The dedicated budget will vary based on the type of projects, return on investment, and overall positive sustainability impact (e.g. GHG emissions reduction potential). In 2018, Great-West Lifeco dedicated over CA\$12 million to energy efficiency-focused projects within its international owner-occupied and investment property portfolio. While significant investments were made in energy efficiency-related projects, only some of these projects had emission reductions accounted for and reported.
Financial optimization calculations	Financial optimization calculations are conducted on a project-by-project basis by asset management and property management teams for major capital expenditures at Great-West Lifeco's corporately owned properties as well as all investment (segregated fund) properties managed by its subsidiary GWL Realty Advisors.
Employee engagement	Employee engagement is a core component of Great-West Lifeco's sustainability strategy. In 2018, Great-West Lifeco continued to expand the mandate of its Corporate Properties Sustainability Working Group (CPSWG) and included teams from international owner-occupied properties. The Working Group, consisting of experienced property management and building operations employees, helps to direct sustainability initiatives with a particular focus on greenhouse gas (GHG) reductions at its corporate properties. So far, the working group has concentrated on retrofits focusing on energy, water and waste reduction, and the sharing of best practices and strategies among its facilities. The Working Group also helps coordinate environment-themed employee engagement activities, such as its participation in the longstanding Earth Day and Earth Hour events. Additionally, sustainability initiatives that can lead to emission reductions at the corporate level are run throughout the year, including energy awareness programs, waste reduction initiatives (e.g. paper use reduction), and the promotion of sustainable commuting strategies.
Other	IGM Financial has an annual dedicated budget for building improvements. This budget includes energy efficiency projects, such as equipment replacements for boilers, lighting, air handling and HVAC systems.

Low-carbon products

(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	Description of product/ Group of products	Are these low-carbon product(s) or do they enable avoided emissions?	Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions	% revenue from low-carbon product(s) in the reporting year	Comment
Group of products	Property management services through Great-West Lifeco's subsidiary GWL Realty Advisors	Low-carbon product	Other: Green buildings as it relates to LEED [®] specifications and/or BOMA BEST [®] operating practices	1%	Through Great-West Lifeco's subsidiary GWL Realty Advisors, select assets under management have been certified as green buildings under LEED [®] certifications and/or BOMA BEST [®] certifications. Furthermore, GWL Realty Advisors is working with building owners and tenants in their office and multi-residential portfolio to minimize the carbon footprint of these assets by prudently managing their overall environmental impact.

Level of aggregation	Description of product/ Group of products	Are these low-carbon product(s) or do they enable avoided emissions?	Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions	% revenue from low-carbon product(s) in the reporting year	Comment
Group of products	Sustainable investment funds (Sustainable Future Fund and Sustainable Leaders Fund) offered through Great-West Lifeco's subsidiary Putnam Investments	Low-carbon product	Other: Putnam's Sustainable Investing Team identifies opportunities for investing in the most effective solutions to challenges in corporate ESG practices, including climate change.	1%	<p>When Putnam's Sustainable Investing Team assesses potential investments in carbon-intensive sectors, a key consideration is an analysis of the rate of change in those metrics and the magnitude of improvement that they expect, given individual company strategies. For the purposes of this report, the company focus is on carbon intensity, which measures the ratio of carbon emissions (Scope 1+2) to revenues, which is one important element of environmental efficiency. The carbon intensity of the Sustainable Leaders portfolio is somewhat lower (better) than the S&P 500, which is used as a representation of the broader market, and this metric is considerably lower (better) for the Sustainable Future Fund. These metrics show positive, but not outstanding, differences versus the market mainly because the Sustainable Leaders Fund is invested in two utilities as of March 31, 2019, which, despite their current fossil fuel use, are leading the way in replacing hydrocarbon-derived power generation with renewable energy generation.</p> <p>The Funds do not explicitly exclude or screen out energy or utility holdings in their process, though it is unusual for companies in these sectors to meet the investment criteria. As active managers, the Funds can selectively own and engage with companies that are actively committed to transitioning away from carbon-intensive energy sources. Therefore, when potential investments in carbon-intensive sectors are assessed, a key consideration is their analysis for the future rate of change in those metrics and the magnitude of improvement that we expect given individual company strategies.</p>
Product	IGM Financial's subsidiary Mackenzie Investments' Global Environmental Equity Fund	Low-carbon product and avoided emissions	Other: Mandate of investment fund to invest in companies involved in the global energy transition from fossil fuels to renewable power.	0.01%	

EMISSIONS METHODOLOGY



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C5 Emissions methodology

Base year emissions

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

Scope	Base year start	Base year end	Base year emissions (metric tonnes CO ₂ e)	Comment
Scope 1	01/01/2013	31/12/2013	19,964	
Scope 2 (location-based)	01/01/2013	31/12/2013	40,896	
Scope 2 (market-based)	01/01/2013	31/12/2013	40,896	

Emissions methodology

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

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

EMISSIONS DATA



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C6 Emissions data

Scope 1 emissions data

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

16,618

Scope 2 emissions reporting

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

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

Scope 2 emissions data

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

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
31,014	31,014	We are reporting both location-based and market-based Scope 2 emissions, however our subsidiary Great-West Lifeco does not have operations where they are able to access electricity supplier-specific emission factors or residual emission factors and are unable to report a Scope 2, market-based figure. Given that we have no renewable energy credits (REC) purchases, our overall market-based and location-based Scope 2 emissions are the same.

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

Scope 3 emissions data

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

Sources of Scope 3 emissions	Evaluation status	Metric tonnes CO ₂ e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Not relevant, calculated	5,362	Weight of paper purchased was multiplied by appropriate emission factors based on % of post-consumer content.	100%	These emissions relate to the procurement of office paper for Great-West Life properties only. Emissions are calculated based on the volume of paper products used by Great-West Life employees.
Capital goods	Not relevant, explanation provided		N/A	N/A	Given the nature of our business, we do not consider capital goods to contribute significantly to our total Scope 3 emissions.
Fuel- and energy-related activities (not included in Scope 1 or 2)	Not relevant, explanation provided		N/A	N/A	These emissions are from diesel and kerosene fuel used in IGM Financial's operations (excluding Scope 1 emissions) as well as from the production of Great-West Lifeco's office buildings, assets, and infrastructure. When considered in the context of the Scope 3 emissions from our investments, these emissions are considered to be immaterial.
Upstream transportation and distribution	Not relevant, calculated	244	Cubic meters of water used by building was multiplied by 1.276 kWh/m ³ and then multiplied by the appropriate electricity emissions factor to represent electricity required to distribute the water.	84.66%	These emissions relate to the transport and distribution of water that Great-West Lifeco purchases for consumption in its corporate owner-occupied and investment buildings. Given the nature of our business, we do not consider upstream transportation and distribution to contribute significantly to our total Scope 3 emissions.

Sources of Scope 3 emissions	Evaluation status	Metric tonnes CO ₂ e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Waste generated in operations	Not relevant, calculated	3,663	Weight of landfill waste was multiplied by country-specific emissions factors. Waste to energy was multiplied by country-specific emissions factors. Waste to energy and landfill waste emissions were combined.	70.91%	This includes emissions related to the waste generated at the corporate offices of Great-West Lifeco and IGM Financial. Given the nature of our business, we do not consider waste generated in operations to contribute significantly to our total Scope 3 emissions.
Business travel	Relevant, calculated	18,654	Distance traveled and/or litres of fuel used were multiplied by country-specific emissions factors.	100%	This includes emissions generated from both air and ground business travel. Given the nature of our business, we do not consider business travel to contribute significantly to our total Scope 3 emissions.
Employee commuting	Not relevant, explanation provided		N/A	N/A	This includes travel by our employees, such as bus, rail and automobile. Given the nature of our business, we do not consider employee commuting to contribute significantly to our total Scope 3 emissions.
Upstream leased assets	Relevant, calculated	11,463	Energy, water and waste data collected from leased properties was multiplied by the appropriate emissions factors provided by Environment Canada, National Inventory Report, 1990-2016.	71%	These emissions include the upstream leased assets of Power Financial, Great-West Lifeco and IGM Financial and relate to the energy, water and waste from Canadian leased properties.
Downstream transportation and distribution	Not relevant, explanation provided		N/A	N/A	Given the nature of our business, we do not consider downstream transportation and distribution to contribute significantly to our total Scope 3 emissions.
Processing of sold products	Not relevant, explanation provided		N/A	N/A	Given the nature of our business, we do not process products for sale.
Use of sold products	Not relevant, explanation provided		N/A	N/A	We do not sell products in our business where the use of sold products would be relevant.
End of life treatment of sold products	Not relevant, explanation provided		N/A	N/A	We do not sell products in our business where end of life treatment would be relevant.

Sources of Scope 3 emissions	Evaluation status	Metric tonnes CO ₂ e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Downstream leased assets	Not relevant, explanation provided		N/A	N/A	The operation of assets that are owned by Power Corporation (acting as lessor) and leased to other entities (including Power Financial) in the reporting year are already included in Scope 1 or Scope 2.
Franchises	Not relevant, explanation provided		N/A	N/A	We do not own any franchises.
Investments	Relevant, calculated	103,272	Energy, water and waste data from segregated investment fund properties was multiplied by the appropriate emissions factors provided by Environment Canada, National Inventory Report, 1990-2016.	83.67%	These emissions cover energy, water and waste at Great-West Lifeco's investment property fund in Canada and partial emissions related to IGM Financial's investment business (approx. 30% of assets in the Investors Real Property Fund where data is available).
Other (upstream)	Not relevant, explanation provided		N/A	N/A	No other upstream emissions are considered material.
Other (downstream)	Not relevant, explanation provided		N/A	N/A	No other downstream emissions are considered material.

Carbon dioxide emissions from biologically sequestered carbon

(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

Emissions intensities

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

Intensity figure	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change	Reason for change
0.0000101	47,631	Unit total revenue	47,025,000,000	Location-based	3.1%	Increased	Power Financial revenues decreased by 5.93% and its GHG emissions decreased by 1,457 tCO ₂ e, in part due to emission reduction activities, including energy efficiency measures.
1.81	47,631	Full time equivalent (FTE) employee	26,312	Location-based	5.9%	Decreased	Employee count at the Power Financial Group increased by 3.10% and its GHG emissions decreased by 1,457 tCO ₂ e, in part due to emission reduction activities, including energy efficiency measures.
0.00518	47,631	Square foot	9,199,214	Location-based	3%	Decreased	Power Financial's square footage remained the same, while GHG emissions decreased by 1,457 tCO ₂ e, in part due to emission reduction activities, including energy efficiency measures.

EMISSIONS BREAKDOWN



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C7 Emissions breakdown

Scope 1 breakdown: GHGs

(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 global warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tonnes in CO ₂ e)	GWP reference
CO ₂	16,236.77	IPCC Fourth Assessment Report (AR4 - 100 year)
CH ₄	8.61	IPCC Fourth Assessment Report (AR4 - 100 year)
N ₂ O	93.63	IPCC Fourth Assessment Report (AR4 - 100 year)
R22	84.66	IPCC/TEAP, 2005, Safeguarding the Ozone Layer and the Global Climate System: Issues Related to Hydrofluorocarbons and Perfluorocarbons
R410a	99.87	IPCC Fourth Assessment Report (AR4 - 100 year)
R123	5.24	http://www.refrigerants.com/pdf/R414B_LINK.pdf
R134a	38.92	IPCC Fourth Assessment Report (AR4 - 100 year)
R407C	49.89	IPCC Fourth Assessment Report (AR4 - 100 year)

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

Country/Region	Scope 1 emissions (metric tonnes CO ₂ e)
Canada	11,609.38
United States of America	1,165.52
United Kingdom of Great Britain and Northern Ireland	587.91
Ireland	3,254.89

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

By facility
By activity

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

Facility	Scope 1 emissions (metric tonnes CO ₂ e)	Latitude	Longitude
Oliver Village	1,071.18	53.547272	-113.518677
Concord Tower	350.54	45.504671	-73.56775
Oxbridge Place	639.09	53.536013	-113.50512
The Hendrix	824.66	53.535425	-113.511754
555 Robson Street	3.55	49.280835	-123.118528
670 Sovereign Road	294.49	43.008638	-81.154967
255 Dufferin Avenue	1,100.24	42.987168	-81.249506
One City Centre Drive	57.54	43.596015	-79.641717
Canada Life Place	244.18	50.448355	-104.612709
180 Queen St	329.08	43.650747	-79.389931
190 Simcoe St	18.24	43.651552	-79.390712

Facility	Scope 1 emissions (metric tonnes CO ₂ e)	Latitude	Longitude
330 University	6.26	43.651758	-79.389572
180 Simcoe St	118.45	43.651184	-79.39046
College Park	1,504.03	43.660711	-79.38626
Yonge Richmond Centre	478.13	43.651497	-79.38066
455 René-Lévesque	7.75	53.517815	-113.49808
433 Main	336.13	49.28078	-123.101865
560 Broadway	28.23	49.885343	-97.154095
Winnipeg Data Center	0.00	49.875361	-97.042264
GWL Centre	2,036.92	49.879174	-97.146911
Block 1, Irish Life Centre	245.78	53.349264	-6.255672
Block 2, Irish Life Centre	237.35	53.349461	-6.254703
Block 3A-3B, Lower Abbey Street	1,055.96	53.349772	-6.255334
Block 4, Irish Life Centre	50.93	53.350347	-6.25571
Block 5, Irish Life Centre	200.66	53.350274	-6.256308
Block A, Abbey Court	151.64	53.349023	-6.256886
Block C, Abbey Court	247.19	53.34922	-6.257573
Block D, Abbey Court	475.98	53.349494	-6.257114
Beresford Court, Beresford Place	260.97	53.348918	-6.255389
Irish Life Centre (Public Car Park)	305.92	53.349889	-6.25654
Block 1 Christchurch Square	9.70	53.342624	-6.272535
Block 2 Christchurch Square	12.83	53.342782	-6.272558
Great-West Financial Centre - Tower I	54.44	39.610576	-104.89244
Great-West Financial Centre - Tower II	273.39	39.61067	-104.89168

Facility	Scope 1 emissions (metric tonnes CO ₂ e)	Latitude	Longitude
Great-West Financial Centre - Tower III	275.10	39.609958	-104.890738
Great-West Financial Centre - North Building	551.86	39.611685	-104.890513
Great-West Financial Centre - Parking Garage No. 1	7.36	39.610677	-104.890684
Great-West Financial Centre - Parking Garage No. 2	3.37	39.611449	-104.889832
Canada Life Place UK	179.11	51.693241	-0.179321
Maple House	119.11	51.692877	-0.179663
Lombard Street	231.65	51.51284	-0.088884
Canada Life Residential Flats	58.04	51.692855	-0.178693
One Canada Place Head Office	0.00	49.891545	-97.150376
Other	2,160.67		

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

Activity	Scope 1 emissions (metric tonnes CO ₂ e)
Natural Gas	12,373.22
Diesel (Back-up Generator)	196.81
Refrigerants	278.57
Vehicle Fuels	1,608.42
Other	2,160.67

Scope 2 breakdown: country

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

Country/Region	Scope 2, location-based (metric tonnes CO ₂ e)	Scope 2, market-based (metric tonnes CO ₂ e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market- based approach (MWh)
Canada	9,719.02	9,719.02	126,209.17	119,007.23
United States of America	14,797.55	14,797.55	23,695.26	
United Kingdom of Great Britain and Northern Ireland	1,678.45	1,678.45	5,929.47	
Ireland	4,818.75	4,818.75	10,971.90	

Scope 2: business breakdowns

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

By facility

By activity

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

Facility	Scope 2, location-based (metric tonnes CO ₂ e)	Scope 2, market-based (metric tonnes CO ₂ e)
Oliver Village	814.22	814.22
Concord Tower	290.31	290.31
Oxbridge Place	1,797.82	1,797.82
The Hendrix	895.51	895.51
555 Robson Street	177.91	177.91
670 Sovereign Road	56.84	56.84
255 Dufferin Avenue	350.05	350.05
One City Centre Drive	139.13	139.13
Canada Life Place	1,455.14	1,455.14
180 Queen St	156.79	156.79
190 Simcoe St	1,289.94	1,289.94
330 University	550.20	550.20
180 Simcoe St	171.46	171.46
College Park	1,338.73	1,338.73

Facility	Scope 2, location-based (metric tonnes CO ₂ e)	Scope 2, market-based (metric tonnes CO ₂ e)
Yonge Richmond Centre	184.09	184.09
455 René-Lévesque	9.24	9.24
433 Main	4.47	4.47
560 Broadway	0.34	0.34
Winnipeg Data Center	16.01	16.01
GWL Centre	18.44	18.44
Block 1, Irish Life Centre	646.75	646.75
Block 2, Irish Life Centre	367.43	367.43
Block 3A-3B, Lower Abbey Street	1,101.82	1,101.82
Block 4, Irish Life Centre	105.56	105.56
Block 5, Irish Life Centre	327.69	327.69
Block A, Abbey Court	232.39	232.39
Block C, Abbey Court	259.61	259.61
Block D, Abbey Court	511.16	511.16
Beresford Court, Beresford Place	360.54	360.54
Irish Life Centre (Public Car Park)	735.70	735.70
Block 1 Christchurch Square	83.93	83.93
Block 2 Christchurch Square	86.17	86.17
Great-West Financial Centre - Tower I	4,198.08	4,198.08
Great-West Financial Centre - Tower II	4,198.08	4,198.08

Facility	Scope 2, location-based (metric tonnes CO ₂ e)	Scope 2, market-based (metric tonnes CO ₂ e)
Great-West Financial Centre - Tower III	2,349.70	2,349.70
Great-West Financial Centre - North Building	3,531.74	3,531.74
Great-West Financial Centre - Parking Garage No. 1	259.88	259.88
Great-West Financial Centre - Parking Garage No. 2	260.07	260.07
Canada Life Place UK	981.31	981.31
Maple House	228.34	228.34
Lombard Street	465.25	465.25
Canada Life Residential Flats	3.56	3.56
One Canada Place Head Office	2.38	2.38

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

Activity	Scope 2, location-based (metric tonnes CO ₂ e)	Scope 2, market-based (metric tonnes CO ₂ e)
Electricity	29,280.45	29,280.45
Steam	1,733.32	1,733.32

Emissions performance

(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.

Reason	Change in emissions (metric tonnes CO ₂ e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption			0%	
Other emission reduction activities	356.99	Decreased	-0.73%	In 2018, we decreased our Scope 1 and 2 GHG emissions by 0.73% due to an increase in the use of renewable energy purchased for IGM Financial's head office (141 tCO ₂ e) and a reduction of business travel in owned assets at Great-West Lifeco (216 tCO ₂ e). As a result, Scope 1 and 2 emissions were reduced by 357 tCO ₂ e. We divided this number by 49,088 (the total Scope 1 and 2 emissions in 2017) to achieve an overall 0.73% decrease. The calculation is as follows: $(-357/49,088)*100 = -0.73$
Divestment			0%	
Acquisitions			0%	
Mergers			0%	
Change in output	53.32	Decreased	-0.11%	In 2018, we decreased our Scope 1 and 2 GHG emissions by 0.11% from a decrease in business travel. As a result, Scope 1 and 2 emissions were decreased by 53 tCO ₂ e. We divided this number by 49,088 (the total Scope 1 and 2 emissions in 2017) to calculate an overall 0.11% decrease from business travel. The calculation is as follows: $(-53/49,088)*100 = -0.11\%$.

Reason	Change in emissions (metric tonnes CO ₂ e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in methodology	421.80	Decreased	-0.86%	In 2018, we decreased our Scope 1 and 2 GHG emissions by 0.86% from a change in emission factors. As a result, Scope 1 and 2 emissions were reduced by 422 tCO ₂ e. We divided this number by 49,088 (the total Scope 1 and 2 emissions in 2017) to achieve an overall 0.86% decrease from emission factors. The calculation is as follows: $(-422/49,088)*100 = -0.86\%$.
Change in boundary			0%	
Change in physical operating conditions	324.90	Decreased	-0.66%	In 2018, we decreased our Scope 1 and 2 GHG emissions by 0.66%, resulting from weather and occupancy changes. As a result, Scope 1 and 2 emissions were reduced by 325 tCO ₂ e. We divided this number by 49,088 (the total Scope 1 and 2 emissions in 2017) to achieve an overall 0.66% decrease from weather and occupancy changes. The calculation is as follows: $(-325/49,088)*100 = -0.66\%$.
Unidentified	618.36	Decreased	-1.26%	In 2018, we decreased our Scope 1 and 2 GHG emissions by 1.26%, resulting from unidentified changes. As a result, Scope 1 and 2 emissions decreased by 618 tCO ₂ e. We divided this number by 49,088 (the total Scope 1 and 2 emissions in 2017) to achieve an overall 1.26% decrease from unidentified changes. The calculation is as follows: $(-618/49,088)*100 = -1.26\%$.
Other	318.54	Increased	0.65%	In 2018, we increased our Scope 1 and 2 GHG emissions by 0.65%, resulting from an increase in the use of diesel & refrigerant top-ups, as well as an increase in the natural gas use at IGM Financial's Head Office (for which renewable energy is purchased). As a result, Scope 1 and 2 emissions increased by 319 tCO ₂ e. We divided this number by 49,088 (the total Scope 1 and 2 emissions in 2017) to achieve an overall 0.65% increase. The calculation is as follows: $(319/49,088)*100 = 0.65\%$.

(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



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C8 Energy

Energy spend

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

More than 0% but less than or equal to 5%

Energy-related activities

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

Activity	Indicate whether your organization undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	Yes
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.

Activity	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (MWh's in LHV)	HHV (higher heating value)	6,098.91	81,758.27	87,857.19
Consumption of purchased or acquired electricity	N/A	107,115.18	50,479.43	157,594.61
Consumption of purchased or acquired heat	N/A	-	-	-
Consumption of purchased or acquired steam	N/A	8,612.68	598.51	9,211.19
Total energy consumption	N/A	121,826.77	132,836.22	254,662.99

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

Fuel application	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 fuel for co-generation or tri-generation	No

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

Fuels	Heating value	Total MWh consumed by the organization
Aviation Gasoline	HHV (higher heating value)	8,066.40
Diesel	Unable to confirm heating value	6,838.95
Natural Gas	Unable to confirm heating value	72,814.64
Motor Gasoline	Unable to confirm heating value	137.20

(C8.2d) List the average emission factors of the fuels reported in C8.2c.

Fuels	Emission factor	Unit	Emission factor source	Comment
Aviation Gasoline	0.00258	metric tonnes CO ₂ e per liter	Environment Canada. Greenhouse Gas Division, National Inventory Report 1990-2016: Greenhouse Gas Sources and Sinks in Canada Part 2. (Ottawa: Environment Canada, 2018.), 212, 216.	The specific emission factors relate to Canadian aviation turbo fuel.
Diesel	0.002797	metric tonnes CO ₂ e per liter	Environment Canada. Greenhouse Gas Division, National Inventory Report 1990-2016: Greenhouse Gas Sources and Sinks in Canada Part 2. (Ottawa: Environment Canada, 2018.), 212, 216.; Emissions Factors for Greenhouse Gas Inventories. Direct Emissions from Stationary Combustion Sources. EPA, Mar 2018; Department of Energy and Climate Change, UK Government GHG Conversion Factors for Company Reporting, https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2018	This is an average of Canadian, US and Irish Diesel Emissions factors.
Natural Gas	0.001997	metric tonnes CO ₂ e per m ³	Environment Canada. Greenhouse Gas Division, National Inventory Report 1990-2016 Part 2: Greenhouse Gas Sources and Sinks in Canada. (Ottawa: Environment Canada, 2018.), 210; Emissions Factors for Greenhouse Gas Inventories. Direct Emissions from Stationary Combustion Sources. EPA, Mar 2018; Department of Energy and Climate Change, UK Government GHG Conversion Factors for Company Reporting, https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2018	This is an average of Canadian provincial natural gas emissions factors as well as the US, UK and Irish natural gas emissions factors. Note that IGM Financial's natural gas is purchased entirely from Bullfrog Energy for their Head Office. This gas has an emission factor of 0 tCO ₂ e.
Motor Gasoline (Vehicle Gasoline)	0.002444	metric tonnes CO ₂ e per liter	EPA, Emissions Factors for Greenhouse Gas Inventories. Direct Emissions from Stationary Combustion Sources, Mar 2018; Department of Energy and Climate Change, UK Government GHG Conversion Factors for Company Reporting, https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2018	This is an average of US and Irish light duty vehicle gasoline emissions factors.

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

Basis for applying a low-carbon emission factor	Low-carbon technology type	Region of consumption of low-carbon electricity, heat, steam or cooling	MWh consumed associated with low-carbon electricity, heat, steam or cooling	Emission factor (in units of metric tonnes CO ₂ e per MWh)	Comment
Other (Ontario Steam)	Other: Steam	North America	8,613	0.184051	Great-West Lifeco purchases district steam for its Toronto owner-occupied office locations. This source produces lower emissions per MWh compared to traditional fossil fuel-based heating sources.
Other (British Columbia Steam)	Other: Steam	North America	599	0.247536	Great-West Lifeco purchases district steam for its Vancouver owner-occupied office location. This source produces lower emissions per MWh compared to traditional fossil fuel-based heating sources.
Other (British Columbia Hydro)	Hydropower	North America	2,681	0.011100	Electricity purchased in British Columbia for Great-West Lifeco's owner-occupied and investment properties comes predominantly (90% of grid mix) from a low-carbon hydroelectric source.
Other (Manitoba Hydro)	Hydropower	North America	26,338	0.001900	Electricity purchased from Manitoba Hydro for Great-West Lifeco's owner-occupied and investment properties in Manitoba comes predominantly (97% of grid mix) from low-carbon energy sources, such as utility-scale hydro and other renewables.
Other (Ontario Hydro)	Hydropower, Nuclear, Wind, Solar	North America	73,668	0.036000	Electricity purchased in Ontario for Great-West Lifeco's owner-occupied and investment properties comes predominantly (90% of grid mix) from low-carbon energy sources including utility-scale hydro, nuclear, wind, solar, and other renewables.
Other (Quebec Hydro)	Hydropower	North America	7,109	0.001300	Electricity purchased in Québec for Great-West Lifeco's corporate property comes predominantly from low-carbon energy sources, including hydropower.
Contract with suppliers or utilities (e.g. green tariff), not supported by energy attribute certificates	Hydropower	North America	5,678	0.00042	Electricity purchased from Manitoba Hydro for IGM's head office property in Manitoba comes predominantly (97% of grid mix) from low-carbon energy sources, such as utility-scale hydro and other renewables.

ADDITIONAL METRICS



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C9 Additional metrics

Other climate-related metrics

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

Description	Metric value	Metric numerator	Metric denominator (intensity metric only)	% change from previous year	Direction of change	Please explain
Waste	3,554	tCO ₂ e		9.4%	Decreased	Waste generation from Great-West Lifeco's Canadian corporate and international properties decreased by 369 tCO ₂ e from 2017 to 2018.
Other: Segregated Fund Properties	90,825	tCO ₂ e		1.9%	Increased	Emissions from Great-West Lifeco's Canadian Segregated Fund properties increased by 1,686 tCO ₂ e. This was due to increases in natural gas usage (1,741 tCO ₂ e) as well as landfill waste (834 tCO ₂ e). These increases occurred despite a combined reduction of 890 tCO ₂ from electricity, steam, water and waste to energy.
Other: Leased Properties	4,913	tCO ₂ e		37.4%	Decreased	Emissions from Great-West Lifeco's Canadian leased properties decreased by 2,935 tCO ₂ e, largely due to significant decreases in waste emissions (2,242 tCO ₂ e). In fact, all other sources (natural gas, electricity, chilled water, steam and water) showed reductions, further reducing emissions by 693 tCO ₂ e.
Other: Water	244	tCO ₂ e		7.4%	Decreased	Water emissions from Great-West Lifeco's Canadian corporate and international properties decreased by 19 tCO ₂ e.
Other: Business Travel	13,545	tCO ₂ e		3.8%	Increased	Business Travel emissions at Great-West Lifeco increased by 493 tCO ₂ e, due to increases in air travel (373 tCO ₂ e) and rail travel (56 tCO ₂ e), despite a decrease in car travel (59 tCO ₂ e).
Other: Paper	5,362	tCO ₂ e		15.5%	Decreased	Great-West Lifeco reduced paper emissions by 987 tCO ₂ e due to a decrease in paper usage at the company's Canadian corporate offices.
Energy Usage	240,181,657	kWh		0.5%	Decreased	Absolute energy usage at Great-West Lifeco's corporate properties was reduced by 1,254 MWh. This was largely due to increases in natural gas usage of 3,713 MWh and steam of 1,913 MWh.

Description	Metric value	Metric numerator	Metric denominator (intensity metric only)	% change from previous year	Direction of change	Please explain
Energy Usage	26.90	kWh	ft ²	0.5%	Decreased	As a result of increases in natural gas and steam usage (primarily), energy intensity at Great-West Lifeco's corporate properties decreased by 0.5% or 0.14 kWh/ft ² .
Other: Water Consumption	563,489	m ³		3.2%	Decreased	Great-West Lifeco's water consumption decreased by 18,682 m ³ as a result of a 29.2% decrease in the Great-West Financial/Putnam properties consumption, a 9.0% decrease in the Canada Life UK consumption and a 4.6% decrease in Irish Life's water usage.
Other: Water Use Intensity	0.06	m ³	ft ²	3.2%	Decreased	Great-West Lifeco's water use intensity decreased by 0.002 m ³ /ft due to the reduction in consumption at the Great-West Financial, Canada Life UK and Irish Life properties.
Other: Waste	2,061	metric tonnes		11.2%	Decreased	Total waste generation at Great-West Lifeco decreased by 260 metric tonnes, due to a decrease across all groups: a 14% decrease from the Irish Life properties, a 13% decrease in the Canadian corporate properties, a 4% decrease in the Canada Life UK properties and a 1% decrease in the Great-West Financial/Putnam properties. Overall, there was a decrease in both waste being sent to landfills, as well as waste being sent to waste-to-energy plants.
Other: Waste Diversion Rate	59.20	percent		13.0%	Increased	Great-West Lifeco's waste diversion rate increased due to an increase in recycling in both the Canadian corporate group (by 340 tonnes) and the Irish Life group (by 139 tonnes). All groups showed a reduction in total waste generated, resulting in a decrease of 260 tonnes of waste.
Waste	109	tCO ₂ e		18.9%	Decreased	Waste generation from IGM Financial's head office decreased by 25 tCO ₂ e from 2017 to 2018.
Other: Real Property Fund Properties	12,447	tCO ₂ e		2.6%	Increased	Emissions from IGM Financial subsidiary IG Wealth Management's Investor Real Property Fund portfolio increased by 317 tCO ₂ e from 2017 to 2018, largely due to an increase in electricity emissions (242 tCO ₂ e).
Other: Leased Properties	6,428	tCO ₂ e		3.8%	Decreased	Emissions from IGM Financial's leased portfolio decreased by 257 tCO ₂ e from 2017 to 2018, largely due to a significant decrease in electricity emissions (281 tCO ₂ e).
Other: Water	0.06	tCO ₂ e		3.2%	Increased	Water emissions from IGM Financial's head office increased by 0.002 tCO ₂ e from 2017 to 2018.

Description	Metric value	Metric numerator	Metric denominator (intensity metric only)	% change from previous year	Direction of change	Please explain
Other: Business Travel	2,329	tCO ₂ e		21.6%	Decreased	Business Travel emissions at IGM Financial were reduced by 642 tCO ₂ e from 2017 to 2018, largely due to a significant decrease in IG Wealth Consultant travel emissions of 626 tCO ₂ e.
Other: Leased Properties	2,821	tCO ₂ e		5.0%	Increased	Emissions at Power Financial's leased properties increased in 2018 by 133 tCO ₂ e due to an increase in all sources (fuel, electricity, chilled water, water and waste), other than natural gas use.
Other: Corporate Air Travel	80	tCO ₂ e		12.2%	Decreased	Corporate travel at Power Financial decreased in 2018 by 11 tCO ₂ e due to a decrease in both medium- and long-haul travel.

VERIFICATION



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C10 Verification

Verification

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

Scope	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 and/or Scope 2 emissions and attach the relevant statements.

Scope	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement Page/section reference	Relevant standard	Proportion of reported emissions verified (%)
Scope 1	Annual process	Complete	Limited assurance	Available on the CDP Database	ISAE 3410	100%
Scope 2 Location-Based	Annual process	Complete	Limited assurance	Available on the CDP Database	ISAE 3410	100%

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope	Verification or assurance cycle in place	Status in the current reporting year	Attach the statement Page/section reference	Relevant standard
Scope 3 - at least one applicable category	Annual process	Complete	Available on the CDP Database	ISAE 3410

Other verified data

(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
C6. Emissions data	Year on year change in emissions (Scope 1)	ISAE 3410	PwC verified the year on year change in emissions for Scope 1, Scope 2, and Scope 3. See CDP Database for PwC Assurance Statement.
C6. Emissions data	Year on year change in emissions (Scope 2)	ISAE 3410	PwC verified the year on year change in emissions for Scope 1, Scope 2, and Scope 3. See CDP Database for PwC Assurance Statement.
C6. Emissions data	Year on year change in emissions (Scope 1 and 2)	ISAE 3410	PwC verified the year on year change in emissions for Scope 1, Scope 2, and Scope 3. See CDP Database for PwC Assurance Statement.
C6. Emissions data	Year on year change in emissions (Scope 3)	ISAE 3410	PwC verified the year on year change in emissions for Scope 1, Scope 2, and Scope 3. See CDP Database for PwC Assurance Statement.

CARBON PRICING



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CT1 Carbon pricing

Carbon pricing systems

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

No, and we do not anticipate being regulated in the next three years.

Project-based carbon credits

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

Yes

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes CO ₂ e)	Number of credits (metric tonnes CO ₂ e): Risk adjusted volume	Credits cancelled	Purpose, e.g. compliance
Credit purchase	Biomass energy	Canada's Renewable Fuels Regulations (SOR 2010-189) under the Canadian Environmental Protection Act 1999. Various Used Cooking Oil and/or Crude Fish Oil By-product from Omega 3 production facilities	Other: Govt. of ON Greener Diesel requirements	20.8	20.8	Yes	Voluntary offsetting by IGM Financial
Credit purchase	Landfill gas	Landfill Capture and Flare. Fredericton Region Solid Waste Commission, BlueRegistry Project 49-1	VER+ (TÜV SÜD standard)	833.33	833.33	Yes	Voluntary offsetting by IGM Financial

Internal price on carbon

(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	GHG Scope	Application	Actual price(s) used (currency/metric tonne)	Variance of price(s) used	Type of internal carbon price	Impact and implication
<p>Navigate GHG regulations</p> <p>Stakeholder expectations</p>	<p>Scope 1</p> <p>Scope 2</p>	<p>The price is applied to all Great-West Lifeco owner-occupied and investment properties in Canada through its subsidiary GWL Realty Advisors.</p>	<p>CAD 30/tCO₂e</p>	<p>CAD 30-50/tCO₂e</p> <p>Great-West Lifeco currently references a carbon price of \$30 per tonne as a proxy, which corresponds with the carbon tax price per tonne of CO₂e in British Columbia (British Columbia's Carbon Tax Act [SBC 2008] Chapter 40, B.C. Reg. 125/2008 O.C. 386/2008). The company also uses a proxy carbon price of \$50 per tonne, as per Canada's national approach to pricing carbon pollution, the "Pan-Canadian Framework".</p>	<p>Implicit price</p>	<p>Great-West Lifeco uses carbon prices for informational purposes - to determine the level of opportunity that its business may have to monetize carbon through potential cap and trade systems (e.g. GHG offset origination for commercial energy efficiency projects). Over time, the company will be exploring how to integrate carbon costs into the investment decision-making process for its retrofit (and other) projects.</p>

ENGAGEMENT



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C12 Engagement

Value chain engagement

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

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

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

Type of engagement	Details of engagement	% of suppliers by number	% total procurement spend (direct and indirect)	% Scope 3 emissions as reported in C6.5	Rationale for the coverage of your engagement	Impact of engagement, including measures of success	Comment
Innovation & collaboration (changing markets)	Innovation and collaboration	N/A	N/A	N/A	As part of our Responsible Procurement Policy and Third Party Code of Conduct, we engage with our suppliers and contractors to influence the provision of environmentally-friendly products and services for our business.	By engaging with suppliers and contractors, we have been able to source more environmentally-friendly products, including LED lighting, energy efficient building equipment, sustainably sourced paper products, among others. Our measure of success is the collaboration and innovation we influence in our supply chain and the number of more environmentally-friendly products and services we procure.	

Type of engagement	Details of engagement	% of suppliers by number	% total procurement spend (direct and indirect)	% Scope 3 emissions as reported in C6.5	Rationale for the coverage of your engagement	Impact of engagement, including measures of success	Comment
Innovation & collaboration (changing markets)	Sustainability consideration (e.g. climate change) integrated into supplier evaluation and as a risk principle in the Supplier Risk Management Policy	29%	31%	100%	<p>Great-West Lifeco specifically engages with critical suppliers to understand the products and services that could reduce the environmental footprint of their buildings, operations, and processes. Supplier evaluation and the company's Supplier Risk Management Policy includes sustainability (including climate change) as one of its considerations. This includes suppliers that support them in improving the sustainability of real estate assets, as well as other products and services that enable the company to reduce energy, water, and material consumption (e.g. building equipment retrofits, utility providers, data centre optimization LED lighting, paper, and building materials). By working collaboratively with these suppliers to encourage alternative and green products and services, it enables them to meet green building certification targets as well as the company's GHG Scope 1+2 reduction target for Canadian properties to achieve a 27.3% GHG reduction by 2025 and a 50.4% reduction by 2036, based on a 2013 baseline year.</p> <p>Please note that the data provided for this question relates to Great-West Lifeco's Canadian operations only.</p>	<p>By engaging with suppliers to provide products and services that reduce its environmental footprint, Great-West Lifeco has been able to achieve its green building certification targets for its corporate head offices and investment properties.</p> <p>Furthermore, the use of more environmentally friendly products and services from suppliers has contributed to the company's targeted GHG reductions for Canadian properties. Specifically, in 2018, a 13.8% reduction was achieved in the Scope 1 and 2 GHG emissions when compared to its baseline year of 2013.</p>	Based on Great-West Lifeco's response to question 6.5, the company engages with 100% of its Scope 3 suppliers, which include the waste management companies, water utilities, paper suppliers, and corporate travel suppliers who provide the necessary information for Great-West Lifeco to calculate the environmental impact (e.g., GHG emissions) of its operations.

Type of engagement	Details of engagement	% of suppliers by number	% total procurement spend (direct and indirect)	% Scope 3 emissions as reported in C6.5	Rationale for the coverage of your engagement	Impact of engagement, including measures of success	Comment
Compliance and onboarding	Included climate change in supplier selection / management mechanism	1%	18%	0%	As a financial services company, IGM Financial hires sub-advisors to manage clients' investments. When selecting and managing these suppliers, the company considers the inclusion of environmental issues, including climate change in the investment process.	<p>IGM Financial's subsidiaries are committed to responsible investing and understand the value of ESG integration and active ownership in the investment process. They request and review related policies, accountability structures and specific metrics and examples through the RFP and Due Diligence processes for external managers.</p> <p>The company's measure of success will be the % of its sub-advisors who are PRI signatories. For example, 97% of IC Wealth Management sub-advisors are PRI signatories as of December 31, 2018.</p>	

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

Type of engagement	Details of engagement	% of customers by number	% Scope 3 emissions as reported in C6.5	Please explain the rationale for selecting this group of customers and scope of engagement	Impact of engagement, including measures of success
Education / information sharing	Run an engagement campaign to educate customers about climate change performance and strategy	100%	100%	<p>Through its subsidiary, GWL Realty Advisors (GWLRA), Great-West Lifeco engages with the tenants, residents, and occupants of its downstream real estate assets under management, to better understand their changing needs, to enhance their services, and to endeavour to exceed their expectations, including with respect to energy management. For example, GWLRA engages to share information on sustainability-related metrics such as green building certification status, energy performance (e.g., energy reductions), water use efficiency, waste production and GHG emissions of the property.</p> <p>GWLRA commercial and multi-residential property managers continue to engage and educate tenants on topics of interest including sharing relevant climate change-related information, such as GHG emissions performance and programs in place to improve GHG emissions at the property-level, such as the Sustainability Benchmarking and Conservation Programs for GWLRA managed office assets (establishing energy, water, waste and GHG targets). GWLRA holds monthly tenant meetings; interacts through green teams, workshops and education events; issues newsletters; and hosts building events to encourage tenant participation in activities, such as Earth Hour, Earth Day/Week, and National Waste Reduction Week.</p> <p>Please note these Scope 3 emissions are specifically associated with the categories "Waste generated in operations" and "Investments" listed in question 6.5.</p>	<p>On an ongoing basis, GWLRA conducts tenant and resident engagement (satisfaction) surveys to inform their continuous improvement efforts at both their commercial and multi-residential properties under management. Results from these satisfaction surveys are tied to the internal performance metrics of property management teams. Issues and follow-ups pertaining to the surveys are addressed by property and asset management teams, as required.</p> <p>By engaging with the occupants of its buildings, GWLRA is able to contribute to the continuous improvement of the efficiency of its assets under management. For example, engagement by GWLRA staff can lead tenants to adopt and install higher efficiency equipment for their spaces. In 2018, GWLRA achieved a 15.0% GHG emission reduction across its office and multi-residential portfolio, compared to its 2013 baseline, in part due to the efforts of tenants and residents.</p>
Education / information sharing	Run an engagement campaign to education customers about climate change performance and strategy	0.2%	0%	<p>IGM Financial subsidiary Mackenzie Investments surveyed 1,500 Canadians through the assistance of a third-party independent research firm. The survey helped the company better understand investor expectations regarding ESG fund demand, including funds addressing climate impacts.</p>	<p>This engagement provided an up-to-date understanding of the market demand for socially responsible products, including those focused on environmental sustainability. IGM Financial's measure of success is its ability to meet client demand for these products.</p>

(C12.1c) Give details of your climate-related engagement strategy with other partners in the value chain.

Other partners – Power Financial engagement with its major subsidiaries

Method of engagement – We engage with our major subsidiaries through a group-wide CSR committee on a range of initiatives, including GHG emissions and climate change.

Strategy for prioritizing engagements – We prioritize our engagements with subsidiaries where we have financial control and significant influence, specifically our major publicly traded subsidiaries, Great-West Lifeco and IGM Financial.

Measures of success – We measure our success based on the progress being achieved. For example, over the past year, we held two awareness sessions with our major subsidiaries to understand their carbon and energy management strategies. Considerable efforts were made by our major subsidiaries to strengthen their commitments on reducing GHG emissions and disclosing their climate change strategies, resulting in external recognition:

- Power Financial and IGM Financial maintained listing status on the FTSE4Good Global Index.
- Great-West Lifeco's real estate subsidiary GWL Realty Advisors was once again recognized as a leader in sustainability by the Global Real Estate Sustainability Benchmark (GRESB), by earning their fourth consecutive Green Star ranking, placing them among the top 7% of firms worldwide.
- IGM Financial maintained its listing status on Sustainalytics' Jantzi Social Index.

Other partners – Great-West Lifeco engagement with community organizations

Method of engagement – Great-West Lifeco engages communities through ongoing dialogue and face-to-face meetings to explore opportunities to support community-based needs on a wide range of sustainability issues, including climate change.

Strategy for prioritizing engagements – Engagements are prioritized based on the needs identified by the community organizations and Great-West Lifeco's specific focus areas. Within its environment focus, Great-West Lifeco prioritizes organizations that are supporting carbon mitigation and adaptation strategies.

Measures of success – Great-West Lifeco measures its success by the number of community projects and their associated impacts in addressing climate change. For example, in 2018, Great-West Lifeco continued to support the International Institute for Sustainable Development (IISD). This included supporting the IISD to publish their "Combating Canada's Rising Flood Costs" with the Insurance Bureau of Canada; hosting a national forum on "Advancing Natural Infrastructure in Canada" bringing leaders across the country to share innovative financing solutions; working to launch a new Centre to support climate adaptation services on the Prairies, and promoting strategies for building the climate resilience of cities.

Other partners – IGM Financial engagement with companies in its investment fund portfolio

Method of engagement – Through the activities of its subsidiaries, IGM Financial is committed to engaging with companies in its investment portfolios on material ESG risks and opportunities, including climate change. Through its subsidiary Mackenzie Investments, internal investment managers and sub-advisors for all three of IGM Financial operating companies engage through proxy voting on environmental issues, as well as through meetings and discussions to better inform the financial and ESG analysis of companies.

Strategy for prioritizing engagements – IGM Financial will prioritize engagements where there may be material climate-related issues. For example, Mackenzie Investments, through its partnership with Hermes EOS, engaged companies to undertake low-carbon scenario analyses and to report on the resilience of their portfolios to the effects of climate change. In 2018, EOS stepped up activities in this area as part of the collaborative investor initiative Climate Action 100+ with the largest corporate greenhouse gas emitters. The aim of Climate Action 100+ is to curb emissions, strengthen climate-related financial disclosures, and improve governance on climate change risk and opportunities.

Measure of success – IGM Financial's measure of success is in having influenced companies towards strategies that support a low-carbon economy, in a way that ensures their long-term resilience as a business. Following discussions with investee companies, EOS took an active role as lead or co-lead engager for 27 companies in the Climate Action 100+ initiative, which has attracted some 310 investors with over \$32 trillion under management. Success will be measured as an increasing number of the companies that IGM Financial has invested in decreasing emissions, strengthening climate-related financial disclosures, and improving governance on climate change.

Public policy engagement

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

Trade associations
Funding research organizations
Other

(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	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you influenced, or are you attempting to influence the position?
International Economic Forum of the Americas (IEF) (Canada)	Consistent	The IEF is committed to heightening knowledge and awareness of the major issues concerning economic globalization, with a particular emphasis on the relations between the Americas and other continents. They include issues related to climate change.	Power Financial's Executive Co-Chairman, Paul Desmarais Jr., is the Chair of the Board of Governors of the IEF (Canada). Through our involvement in the IEF, we support efforts being taken to increase awareness and collaboration between international governments on a wide range of issues, including climate change.
Brookings International Advisory Council	Consistent	Brookings established the International Advisory Council, a group of distinguished international business and community leaders, to extend its outreach and relevance to other countries and increase its ability to inform the American public and policymakers about global developments, including energy and environment issues.	Power Financial's Executive Co-Chairman, Paul Desmarais Jr., is Co-Chairman of The Brookings International Advisory Council and a member of their Board of Trustees. Through our involvement, we support efforts being taken to develop effective, pragmatic policies for addressing national and global issues including energy and environmental issues.
Canadian Institute of Actuaries (CIA)	Consistent	The CIA supports the advancement of knowledge into better understanding the impact of climate change and has developed a Climate Change and Sustainability Committee. Part of the Institute's role is to raise awareness of climate change and environmental sustainability with both members and the public.	Through the membership of Great-West Lifeco's employees on the CIA, Great-West Lifeco is engaging within the industry to better understand how climate change could impact insurance pricing and valuation models.

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you influenced, or are you attempting to influence the position?
American Academy of Actuaries	Consistent	The American Academy of Actuaries supports knowledge and raises awareness among policymakers and the public at large of the increasing risks from extreme weather events. It aims to evaluate and help manage exposure to these risks from an insurance perspective, by combining current climate science knowledge with actuarial experience.	As members of the American Academy of Actuaries, Great-West Lifeco supports and is increasing its own knowledge of climate risks.
Chartered Financial Analyst (CFA) Institute	Consistent	The mission of the CFA Institute is served by generating value for core investment management professionals and engaging with the core investment management industry to advance ethics, market integrity, and professional standards of practice, which collectively contributes value to society. The CFA Institute provides knowledge on climate change risks, pricing and management.	As members of the CFA Institute, Great-West Lifeco is supporting and increasing its own knowledge of climate risks.
REALpac (Real Property Association of Canada)	Consistent	REALpac recognizes the significant economic, environmental, social, governance (EESG) impact of Canada's commercial real estate sector, and the need for an industry-driven approach toward supporting national and provincial strategies on greenhouse gas reduction (climate change action), the importance of reasoned discourse with political and policy officials, and the value of persuasive arguments for sustainable economic growth. The Association also recognizes the need for industry-wide "green" benchmarking data and shared best practices, and is working with its constituents and its national and international counterparts to help to responsibly ensure the sector is well positioned for a sustainable future.	As members of REALpac, as well as REALpac's Environment, Social and Governance Committee, Great-West Lifeco supports initiatives to increase awareness on energy improvements and increase government incentives towards energy efficient existing and new commercial real estate.
Building Owners and Managers Association (BOMA) and its regional chapters	Consistent	BOMA is the voice of the Canadian commercial real estate industry, addressing issues of national concern, and promotes excellence in the industry through information, education, advocacy and recognition, including on issues of carbon and energy efficiency. BOMA Canada implements timely, responsible and consistent policy positions on issues of critical importance to the Canadian commercial real estate industry (including climate change-related legislation).	Through Great-West Lifeco's Board membership with BOMA, the company supports initiatives to increase awareness of energy and climate change issues, and incentives to increase building energy and carbon efficiency investments.

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you influenced, or are you attempting to influence the position?
Canada Green Building Council (CaGBC)	Consistent	The CaGBC's mission is to "Lead and accelerate the transformation to high-performing, healthy green buildings, homes and communities throughout Canada." This includes the adoption of green building practices that ultimately lead to reduced greenhouse gas emissions. The CaGBC is working with federal, provincial and municipal leaders and government officials to support the development and implementation of green building policies and sustainability practices across Canada and is working with CaGBC members and stakeholders to set and report against ambitious targets and action plans that will contribute to COP21 goals.	Through Great-West Lifeco's membership with the CaGBC, the company supports initiatives to increase the adoption of green building practices, participation in green building certification systems, and incentives to increase energy and carbon efficiency investments.
NAIOP (Commercial Real Estate Development Association)	Consistent	NAIOP is an organization for developers, owners, and investors of office, industrial, retail and mixed-use real estate. They provide strong advocacy, education and business opportunities on a range of issues. The organization is committed to providing its members with education and resources that encourage environmentally-responsible choices, as well as issuing policy statements that promote the utilization of sustainable building practices. Energy efficiency is a legislative priority for NAIOP and the "NAIOP supports the advancement of higher levels of energy efficiency for commercial buildings through solutions that incorporate federal incentives, and realistic time frames for the financial recoupment of efficiency investments through utility savings."	Through Great-West Lifeco's membership on the NAIOP, the company supports initiatives to increase awareness of energy and climate change issues as part of a broader mandate for real estate operations.
Urban Land Institute (ULI)	Consistent	The Urban Land Institute is the oldest and largest network of cross-disciplinary real estate and land use experts in the world. The ULI provides leadership in the responsible use of land and in creating and sustaining thriving communities worldwide. One of the ULI's six commitments is to "Exploring issues: Of urbanization, conservation, regeneration, land use, capital formation, and sustainable development". ULI also maintains a Centre for Sustainability and Economic Performance that is "dedicated to creating healthy, resilient, and high-performance communities around the world. Through the work of its Greenprint and Urban Resilience programs, the Center provides leadership and support to land use professionals to invest in energy performance and portfolio resilience while reducing risks due to a changing climate."	Through Great-West Lifeco's membership in ULI, the company supports initiatives and research focused on responsible and sustainable land use planning and development, including issues related to building resilience, energy conservation and climate change adaptation/mitigation.

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

No

(C12.3e) Provide details of the other engagement activities that you undertake.

As a subsidiary of Power Corporation, corporate donations are conducted through Power Corporation's Donations Committee on behalf of both Power Corporation and Power Financial. We fund various organizations that produce public work on climate change. The following provides examples of the research organizations we support:

- Nature Conservancy of Canada (NCC) – Power Corporation has been supporting the NCC since 2005. The NCC is a leading national land conservation organization that partners with individuals, corporations, other non-profit organizations and governments to protect the natural areas that sustain Canada's plants and wildlife, including through their conservation research efforts.
- Earth Rangers – Power Corporation provides funding for Earth Rangers covering a three-year period from 2018 to 2020. Earth Rangers is a kids' conservation organization whose free programs aim to instill environmental knowledge, positivity and the confidence to take action. Earth Rangers also works with a variety of national, regional and local conservation organizations to develop projects to protect endangered animals, ranging from conservation research, to land acquisition, to habitat stewardship.
- David Suzuki Foundation – Power Corporation provided funding for the Foundation covering a nine-year period from 2007 to 2015, and has renewed its commitment for 2019-2020. The David Suzuki Foundation works with government, business and individuals to conserve the environment by providing science-based education, advocacy and policy work, and acting as a catalyst for social change.

The support that we provide to these foundations is in line with our strategy to contribute to community projects and initiatives that increase awareness and knowledge on climate change. We also invest in companies that share our philosophy and values, supporting a wide array of causes, including organizations promoting environmental stewardship. Our subsidiaries support organizations that produce public work on climate change and encourage their staff to get involved with environmental causes the companies support.

The following provides examples of engagements by our major subsidiaries Great-West Lifeco and IGM Financial:

International Institute for Sustainable Development (IISD) – Great-West Lifeco

Method of engagement – Great-West Lifeco engages with the IISD to promote research and knowledge of the risks associated with climate change.

Topic of engagement – The topic of engagement is focused on understanding the risk of climate change and how we can anticipate the risk to increase community resilience.

Nature of engagement – The company is the catalyst funder for Prairie Climate Centre – a joint venture between the IISD and the University of Winnipeg. The Centre provides research, advice and policy development.

Actions advocated as part of the engagement – Through its engagement, Great-West Lifeco is supporting coordinated research, advice and policy development on climate change. For example, in 2018, Great-West Lifeco continued its support for the IISD, and, as part of this partnership, contributed to building the capacity of Manitobans to understand, prepare for, and build resilience to the impacts of climate change. This included support for the IISD to publish their “Combating Canada’s Rising Flood Costs” with the Insurance Bureau of Canada; hosting a national forum on “Advancing Natural Infrastructure in Canada” bringing leaders across the country to share innovative financing solutions; working to launch a new center to support climate adaptation services on the Prairies, and promoting strategies for building the climate resilience of cities.

EcoPass/Allego/VIP Public Transit Incentive Program – IGM Financial

Method of engagement – IGM Financial engages through partnership agreements with city transit organizations to incentivize the use of public transport for employees to enable carbon reductions from their travel to/from work. The company has partnership agreements with Winnipeg Transit and the Montreal Metropolitan Transit Agency as well as with the Toronto Transit Commission’s Volume Incentive Program (VIP).

Topic of engagement – The company engages with the above agencies so employees have access to cleaner transportation modes with a lower carbon impact.

Nature of engagement – The engagements relate specifically to the agency incentive programs aimed at promoting public transit.

Actions advocated as part of the engagement – Through its engagement, IGM Financial actively advocates for continuation of these programs and possible enhancements to subsidize the cost for employees that use public transit. Through these subsidies, the company expects to reduce the use of its employees’ personal vehicles, which ultimately reduce their carbon emissions. In 2018, IGM Financial estimated that the use of public transit by its employees saved approx. 690 tonnes of CO₂ emissions compared to employees taking their own personal vehicles to work.

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

The CSR Lead provides oversight on matters related to the Corporation’s corporate social responsibility initiatives. Through this role, the CSR Lead ensures that direct and indirect activities that influence public policy are consistent with the Corporation’s overall responsible management strategy, including topics that relate to climate change.

Communications

(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	Status	Attach the document	Page/Section reference	Content elements
In mainstream reports	Complete	Power Financial 2018 Annual Report	Pages XV-XVI	Governance Strategy Risks and opportunities Other metrics
In voluntary communications	Underway - Previous year attached	Power Financial CSR Data Supplement	Pages 5-8	Emissions figures
In voluntary communications	Complete	Power Financial CSR website - Energy and Carbon Efficiency	Whole document	Strategy Emission targets
In mainstream reports	Complete	Great-West Lifeco 2018 Annual Report	Page 15, page 77	Risks and opportunities Other metrics
In voluntary communications	Complete	Great-West Life 2018 Public Accountability Statement	Pages 18-23	Strategy Emission targets Emission figures Other metrics
In voluntary communications	Complete	Great-West Life CSR website	Whole document	Emission figures
In mainstream reports	Complete	IGM 2018 Annual Report	Pages 9-10, page 77	Strategy Risks and opportunities
In voluntary communications	Complete	IGM CSR website	Pages 54-56	Governance Strategy Emission figures Emission targets Other metrics

Publication	Status	Attach the document	Page/Section reference	Content elements
In voluntary communications	Complete	IGM CSR website - 2018 Data Table	Pages 7-8	Emission targets Emission figures Other metrics
In mainstream reports	Complete	Pargesa 2018 Annual Report	Page 71	Strategy
In mainstream reports	Complete	Groupe Bruxelles Lambert 2018 Annual Report	Pages 54-66	Governance Strategy Risks and opportunities Other metrics
In voluntary communications	Complete	GWL Realty Advisors 2018 Annual Review	Pages 8-10 Pages 21-23 Pages 34-35	Strategy Emission targets Emission figures



SIGNOFF



POWER FINANCIAL
CORPORATION

CARBON
DISCLOSURE
PROJECT
2019



C14 Signoff

Signoff

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

Job title	Corresponding job category
President and Chief Executive Officer	Chief Executive Officer (CEO)