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CARBON DISCLOSURE PROJECT 2018

## 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 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., Mackenzie Financial Corporation 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 effective interest in these companies is as follows: Imerys – mineral-based specialties for industry (7.47%); SGS SA – testing, inspection and certification services (2.30%); LafargeHolcim – cement, aggregates and concrete (1.31%); Pernod Ricard – wines and spirits (1.04%); adidas – design and distribution of sportswear (1.04%); Umicore, NV/SA – materials technology and recycling (2.36%); Total SA – oil, gas and alternative energies (0.08%); Burberry Group plc – a global luxury brand (0.90%), Ontex N.V. – disposable hygiene products (2.76%); GEA Group – supplier of process technology to the food industry (0.60%); and Parques Reuniodos 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 make reference to the activities of our group companies. Many of these companies 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
From: 01/01/2017	To: 31/12/2017

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

Country
Canada, U.S., Ireland and U.K.

(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



# C1 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 / Executive Board	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
Sporadic - as important matters arise	Monitoring implementation and performance of objectives	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.  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.  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.

## (C1.2) Below board-level, provide the highest-level management 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	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 committees 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?	The 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 (but is not limited to): identifying and managing emerging risks (e.g., climate change-related risk) and identifying optimal property catastrophe cover retrocession reinsurance opportunities within defined criteria and considering exposure to property risks, including physical climate parameters.
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 carbon reduction target.

Who is entitled to benefit from these incentives?	The type of incentives	Activity incentivized	Comment
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.
Facility managers	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.
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, who is a member of the executive team. His 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: Facilities Manager	Monetary reward	Efficiency project	Incentives for the management of climate change issues are provided by IGM Financial to its property managers and their leaders at its operating companies who are incentivized through the annual bonus structure for progress on achieving BOMA BEST® and Leadership in Energy and Environmental Design (LEED®) certifications at their corporate properties. Their annual objectives also include addressing climate-related issues in building operations. These incentives align with IGM Financial's carbon reduction targets of 40% by 2020 and 50% by 2036 for Scope 1 and 2 emissions (based on 2013 emissions).
Other: Environment/ Sustainability Managers	Monetary reward	Other: Behaviour change related indicator	Incentives for the management of climate change issues are provided by IGM Financial to the Vice-President, Finance & Corporate Responsibility and the Manager, Corporate Responsibility. Their 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.



# 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 3-5 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	From (years)	Comment
Six-monthly or more frequently	> 6 years	Climate change risks and opportunities are integrated into the Corporation's company wide-risk management processes. 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 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. As part of this process and through our interactions with the senior management of our subsidiaries and investments, we take into consideration the assessments of our subsidiaries and investments.

For example, Great-West Lifeco prioritizes climate change risks and opportunities on a regular basis based on the magnitude of the impact and the likelihood of occurrence on their operations and business products and services. Where relevant, the company also considers the velocity of the risk to understand how quickly the climate risk could impact its business operations. IGM Financial assesses climate-related risk by taking into consideration both the likelihood and the severity of the impact of the risk event using a standard set of assessment criteria including consideration of financial, reputational, operational, and regulatory / compliance impact. Each one of the risk categories is assessed to determine the overall impact to the company. The assessment enables them to determine the inherent risk (absent of controls) and the residual risk (after controls). Great-West Lifeco's executive-led Risk Management Committee establishes the appetite for different risk types, and prioritization is conducted by reviewing their residual risks relative to risk appetite. Through its Enterprise Risk Management process, IGM Financial defines a risk with a significant long-term impact as one with a major impact to capital or market capitalization or as one with a significant impact on the company'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	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.
		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. Specifically, Great-West Lifeco assessed climate-related regulations and carbon pricing impacts on its operations, owner-occupied and investment properties, and its investments. The impact of climate-related regulations on the company's investments is inherently limited given the diversification of Great-West Lifeco's business. For instance, in the company's Bonds investments portfolio in 2017, no individual sector accounted for more than 10% of invested assets. IGM Financial conducted a similar review. They too have an inherent diversification strategy that limits their risk exposure. In 2017, they reviewed the impact of GHG regulations on their total equity holdings for Investors Group and Mackenzie Investments, and determined that 0.04% is invested in the coal and consumable fuel industry, which is an industry exposed to current climate-related regulation. 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.  With respect to our interests in other business sectors, there is potentially a higher indirect exposure. As an example, Imerys indicated in its 2017 CDP submission some exposure to cap and trade schemes in Europe, California and China. With approximately 1% of our total assets invested in these other business sectors, we do not expect these potential current regulatory risks to have a substantive impact on Power Financial.

Risk type	Relevance & inclusion	Please explain
Emerging regulation	Relevant, sometimes included	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.  As part of our process, we consider the climate risks related to emerging regulations assessed by our major subsidiaries, Great-West Lifeco and IGM Financial, where a majority of our interests (approx. 99% of our assets) are held. Specifically, Great-West Lifeco reviewed the possible impacts of the Canadian Federal government's proposed carbon pricing system on its acquisition and ongoing management of corporate and investment properties, loans secured by real property, and investments in equity and fixed income securities. From an investment standpoint, the company's exposure to sectors and regions impacted by carbon pricing is further minimized through the diversification of its business and assets. For instance, in 2017, no individual sector accounted for more than 10% of Great-West Lifeco's invested assets. For example, together, the energy, transportation and utilities sectors, amounted to approximately 20% of invested bond assets in 2017. IGM Financial conducted a similar review. They too have an inherent diversification strategy that limits their risk exposure. In 2017, the company reviewed the impact of emerging GHG regulations on their total equity holdings for Investors Group and Mackenzie Investments, and determined that 0.04% is invested in the coal and consumable fuel industry, which is an industry exposed to current climate-related regulation. 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.  With respect to our interests in other business sectors, there is potentially a higher indirect exposure. As an example, Imerys indicated
		Europe, California and China. With approximately 1% of our total assets invested in these other business sectors, we do not expect these potential emerging regulations to have a substantive impact on Power Financial.

Risk type	Relevance & inclusion	Please explain
Technology	Relevant, always included	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.
		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. Specifically, 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 2017 represented less than 0.5% of Great-West Lifeco's overall net income. 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. 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.  With respect to our interests in other business sectors, there is a limited indirect exposure from climate-related risks of technology advancements. In 2017, we did not identify potential exposure to carbon-related technology risks. With approximately 1% of our total assets invested in these other business sectors, we do not expect potential climate-related technology risks to have a substantive impact on Power Financial.

Risk type	Relevance & inclusion	Please explain
Legal	Relevant, sometimes included	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.  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. Specifically, 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 2017, 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 highly exposed to litigation lawsuits amounted to less than 5% of invested assets in bonds or equities. IGM Financial conducted a similar review. They too have a diversification strategy that limits their risk exposure. For example, of their total equity holdings for Investors Group and Mackenzie Investments, 0.04% are invested in the coal and consumable fuel industry, which is an industry exposed to legal risk. 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.
		With respect to our interests in other business sectors, there is a limited indirect exposure from climate-related litigation. As an example, in 2017, we did not identify any known climate-related litigation in our other investments. With approximately 1% of our total assets invested in these other business sectors, we do not expect potential climate-related litigation risks to have a substantive impact on Power Financial.

Risk type	Relevance & inclusion	Please explain
Market	Relevant, always included	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.
		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. Specifically, 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. IGM Financial determined that the risk of not being able to meet market demand for products that integrate climate-related factors is low. In 2017, for instance, their total investment funds with specific environmental and social mandates represented 0.3% of the company's assets under management at December 31 (versus 0.4% in 2016). 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.
		With respect to our interests in other business sectors, there is a potentially higher indirect exposure from climate-related market risks. As an example, Imerys indicated in its 2017 CDP submission some exposure to fluctuating socio-economic conditions resulting from climate related impacts and reduced demand for its goods/services. However, with approximately 1% of our total assets invested in these other business sectors, we do not expect these potential climate-related market risks to have a substantive impact on Power Financial.

Risk type	Relevance & inclusion	Please explain
Reputation	Relevant, always included	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 impact on our reputation from investors for not effectively demonstrating how climate change risks and opportunities are managed.
		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. For example, Great-West Lifeco assessed the increase in investor interest on environmental, social and governance factors, which includes responding to and mitigating climate risks. However, when considered generally in the context of the overall business and other types of reputational risks, the company does not consider climate-related reputational risks to have a substantive impact on its business, revenues or expenditures. 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. 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.
		With respect to our interests in other business sectors, there is a limited indirect exposure from climate-related reputational risks. In 2017, we did not identify any known climate-related reputational risks in our investments. With approximately 1% of our total assets invested in these other business sectors, we do not expect potential climate-related reputational risks to have a substantive impact on Power Financial.

Risk type	Relevance & inclusion	Please explain
Acute Physical	Relevant, always included	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 with respect to increased severity of extreme weather events.
		As part of our process, we consider climate-related acute physical risks assessed by our major subsidiaries, Great-West Lifeco and ICM Financial, where a majority of our interests (approx. 99% of our assets) are held. For example, 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. In 2017, for instance, Great-West Lifeco established reserves of \$175 million for claims relating to hurricane losses. While important, these losses did not have a substantive impact on the business and are not considered a substantive inherent risk to its overall earnings potential. IGM Financial reviewed Investors Group's mortgage portfolio for risks driven by extreme weather events which, if not addressed proactively, could impact the financial performance of their business and determined it was not substantive given its inherent diversification investment strategy. For instance, in 2018, IGM Financial's mortgage portfolio contained 1,100 mortgages in British Columbia and New Brunswick impacted by flooding from extreme weather events, which represented less than 1.9% of total mortgages under administration. 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.  With respect to our interests in other business sectors, there is a potentially higher indirect exposure from climate-related acute physical risks. However, with approximately 1% of our total assets invested in these other business sectors, we do not expect these potential acute physical risks to have a substantive impact on Power Financial.

Risk type	Relevance & inclusion	Please explain
Chronic Physical	Relevant, always included	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.
		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. For example, Great-West Lifeco considered exposure of warming temperatures on its life and health insurance business, and the impacts on morbidity and mortality rates. The risk was considered marginal, given its diversification of morbidity and mortality risks by limiting concentrations in any one specific region or geography and the fact that the company has not experienced notable changes in its insurance claims as a result of climate-related health impacts. IGM Financial reviewed the impacts of chronic physical risks on the energy costs of its properties and determined that the risks would be limited given that energy costs represent less than 1% of their operating costs. 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.
		With respect to our interests in other business sectors, there is a potentially a higher indirect exposure from climate-related chronic physical risks. As an example, Imerys indicated in its 2017 CDP submission some exposure to the uncertainty of physical risks from increased natural disasters that could impact operational costs. With approximately 1% of our total assets invested in these other business sectors, we do not expect these potential chronic physical risks to have a substantive impact on Power Financial.

Risk type	Relevance & inclusion	Please explain
Upstream	Relevant, sometimes included	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.
		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. For example, Great-West Lifeco through its subsidiary GWL Realty Advisors 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 the fee income and related expenses from GWL Realty Advisors represents less than 0.5% of Great-West Lifeco's overall net income. 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. 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.
		With respect to our interests in other business sectors, there is a limited indirect exposure from climate-related upstream risks. In 2017, we did not identify any known climate-related upstream risks in our investments. With approximately 1% of our total assets invested in these other business sectors, we do not expect potential climate-related upstream risks to have a substantive impact on Power Financial.

Risk type	Relevance & inclusion	Please explain
Downstream	Relevant, always included	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.
		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. For example, 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 2017, for instance, the fee income from Great-West Lifeco's responsible investment products represented less than 0.1% of its overall net income. IGM Financial determined that the risk of not being able to meet market demand for products that integrate climate-related factors is not substantive. In 2017, for instance, their total investment funds with specific environmental and social mandates represented 0.3% of the company's assets under management at December 31. 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.  With respect to our interests in other business sectors, there is a limited indirect exposure from climate-related downstream risks. In 2017, we did not identify any known climate-related downstream risks in our investments. With approximately 1% of our total assets invested in these other business sectors, we do not expect potential climate-related downstream risks to have a substantive impact on Power Financial.

#### (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. 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. Through this process, risks are prioritized and appropriate policies and controls are established to ensure effective management.

#### Case Examples of 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, Great-West Lifeco 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, including windstorms, hurricanes and cyclones. 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, in 2017, Great-West Lifeco established reserves of \$175 million for claims relating to losses from hurricanes Harvey, Irma and Maria combined in the third quarter of the year, which did not result in a substantive impact to the 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.

#### <u>Description of a Process for Managing Climate-Related Opportunities</u>

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 trends we have identified in the sustainable and renewable energy markets. Through market trend analysis, we identified continued growth in the renewable energy sector, driven in part by favourable government policies and increasing incentives. As a result of these trends, Great-West Lifeco's Bond Investment Group continued to support provincial green bond programs in Canada by participating in purchases of Ontario and Quebec green bonds. In 2017, GWL's Private Debt Investments group in Canada invested over \$880 million in renewable energy projects, which included wind, solar, and hydro energy projects, investments in publicly issued green bonds, as well as investments in transit-oriented and LEED certified P3 projects.

## 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
Risk exist, but none with potential to have a substantive financial or strategic impact on the business	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 compile information through engagements with the senior management of our subsidiaries and portfolio companies, and through the investment analysis process, where relevant. In 2017, we did not identify climate-related risks with substantive impacts on our business.  Relating to physical risks, both Great-West Lifeco and IGM Financial disclosed in their respective CDP submissions that physical 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. In 2017, for example, Great-West Lifeco established reserves of \$175 million for claims relating to losses from hurricanes Harvey, Irma and Maria combined which did not result in a substantive impact to the business.
	Great-West Lifeco and IGM Financial also considered regulatory, reputational and legal risks. From a regulatory standpoint, they determined that carbon pricing and GHG regulations would not substantively impact their business, given their inherent diversification. For example, in 2017, the percentage of assets at Great-West Lifeco exposed to climate-related regulations, such as the energy and utility sectors, amounted to 12.3% of the company's invested assets. From a reputational perspective, IGM Financial assessed the potential for material climate-related litigation against specific sectors in the company's funds that may be highly exposed to climate change impacts. 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. For example, of the total equity holdings for Investors Group and Mackenzie Investments, 0.04% are invested in the coal and consumable fuel industry, which is an industry exposed to legal risk. Therefore, we have limited exposure to climate-related legal risk.  With respect to other businesses, Imerys indicated in its 2017 CDP some risk exposure to physical and socioeconomic risks, however, our investments in these other businesses represent 1% of our assets and therefore would not be substantive to our business.

## 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
Opportunity exists, but none with the potential to	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 2017, we did not identify climate-related opportunities that could substantively impact our business.
have a substantive financial or strategic impact on the business	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. Great-West Lifeco has taken advantage of investments in the renewable energy market, having invested over \$880 million in renewable energy projects, including wind, solar, and hydro project investments, publicly issued green bonds and transit-oriented and LEED certified P3 projects through Great-West Life's Private Debt Investments Group. While important, these investments are not substantive given that less than 1% of Great-West Lifeco's asset value is tied to investments in renewable energy markets.
	Additionally, the demand for climate-related products and services has not substantively impacted our business. For example, fee income of Great-West Lifeco's real estate management services represented less than 0.5% of its overall income, and income from its responsible investment options represented less than 0.1% of its overall net income. At IGM Financial, demand for products incorporating climate-related considerations has been limited. Investors Group offers the Investors Summa SRI Fund which prioritizes investment in climate-change related opportunities, including investing in companies with a clear path to transition to cleaner fuels. In 2017, Mackenzie Investments also launched three new socially, responsible and impact funds. While these products are important, they represent 0.3% of the company's total assets under management, which is not substantive to its business.
	With respect to our other businesses, many of our companies are taking advantage of climate-related opportunities. For example, Imerys continues to develop carbon efficient products. Though important to the respective companies, our investments in these businesses represent 1% of our assets and therefore the opportunities would not be substantive to our business.

## Business impact assessment

## (C2.5) Describe where and how the identified risks and opportunities have impacted your business.

	Impact	Description
Products and services	We have not identified any risks and opportunities	We have not identified any risks and opportunities associated with climate change relating to our subsidiaries' products and services that could have a substantive impact on Power Financial. Please refer to risks and opportunities questions 2.3b and 2.4b of this questionnaire, for further details.
Supply chain and/or value chain	We have not identified any risks and opportunities	We have not identified any risks and opportunities associated with climate change in our supply chain and/or value chain that could have a substantive impact on Power Financial. Please refer to risks and opportunities questions 2.3b and 2.4b of this questionnaire, for further details.
Adaptation and mitigation activities	We have not identified any risks and opportunities	We have not identified any risks and opportunities associated with climate change adaption and mitigation activities that could have a substantive impact on Power Financial. Please refer to risks and opportunities questions 2.3b and 2.4b of this questionnaire, for further details.
Investments in R&D	We have not identified any risks and opportunities	We have not identified any risks and opportunities associated with climate change-related investments in research and development that could have a substantive impact on Power Financial. Please refer to risks and opportunities questions 2.3b and 2.4b of this questionnaire, for further details.
Operations	We have not identified any risks and opportunities	We have not identified any risks and opportunities associated with climate change on our operations that could have a substantive impact on Power Financial. Please refer to risks and opportunities questions 2.3b and 2.4b of this questionnaire, for further details.

## Financial planning assessment

## (C2.6) Describe where and how the identified risks and opportunities have factored into your financial planning process.

	Relevance	Description
Revenues	We have not identified any risks and opportunities	We have not identified any climate-related risks and opportunities in our business that could have a substantive impact on Power Financial's revenues. Please refer to risks and opportunities questions 2.3b and 2.4b of this questionnaire, for further details.
Operating costs	We have not identified any risks and opportunities	We have not identified any climate-related risks and opportunities in our business that could have a substantive impact on Power Financial's operating costs. Please refer to risks and opportunities questions 2.3b and 2.4b of this questionnaire, for further details.
Capital expenditures / capital allocations	We have not identified any risks and opportunities	We have not identified any climate-related risks and opportunities in our business that could have a substantive impact on Power Financial's capital expenditures and/or capital allocation. Please refer to risks and opportunities questions 2.3b and 2.4b of this questionnaire, for further details.
Acquisitions and divestments	We have not identified any risks and opportunities	We have not identified any climate-related risks and opportunities in our business that could have a substantive impact on Power Financial's acquisitions and divestments. Please refer to risks and opportunities questions 2.3b and 2.4b of this questionnaire, for further details.
Access to capital	We have not identified any risks and opportunities	We have not identified any climate-related risks and opportunities in our business that could have a substantive impact on Power Financial's access to capital. Please refer to risks and opportunities questions 2.3b and 2.4b of this questionnaire, for further details.
Assets	We have not identified any risks and opportunities	We have not identified any climate-related risks and opportunities in our business that could have a substantive impact on Power Financial's assets. Please refer to risks and opportunities questions 2.3b and 2.4b of this questionnaire, for further details.
Liabilities	We have not identified any risks and opportunities	We have not identified any climate-related risks and opportunities in our business that could have a substantive impact on Power Financial's liabilities. Please refer to risks and opportunities questions 2.3b and 2.4b of this questionnaire, for further details.

## **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-change 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.

Great-West Lifeco, for example, considered energy performance in their corporate buildings and investment real estate properties, as well as extreme weather events at their properties to inform business continuity and climate adaptation strategies. The company also considered customer demands that are influencing their responsible investment growth strategies, extreme weather events in their reinsurance and insurance business that influence pricing, underwriting and new product strategies, government incentives in cleaner renewable energy and green infrastructure influencing the growth of Great-West Lifeco's green bond investment portfolios, and stakeholder requests that are driving carbon reporting strategies.

Specifically, 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 that support the transition to a low carbon economy in North America. As a result, the company is now investing more to support the transition to a low carbon economy. For example, last year Ontario, Canada, launched its second green bond in the form of a \$759 million 2023 seven-year new issue to finance transit and other low-impact infrastructure projects across the province. Great-West Life's Bond Investments Group supported this Green Bond program, making purchases of the new issue. The Bond Investments team also made purchases in Quebec's inaugural \$500 million 2017 Green Bond issue, which will be used to finance environmentally friendly projects in accordance with Quebec's Green Bond Framework.

#### 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 Scope 1 and 2 greenhouse gas (GHG) reduction targets: Power Financial's target of 8% by 2020; Great-West Lifeco's target of 27.3% by 2025 and 50.4% by 2036; and IGM Financial's target 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 2017 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 continued to grow its property and casualty reinsurance business, influenced by the demand for property catastrophe retrocession opportunities driven by economic and risk modelling factors such as 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.

IGM Financial expanded Mackenzie Investments' suite of socially responsible and impact funds including the launch the Mackenzie Global Sustainability and Impact Balanced Fund. The fund invests in a sustainable way and uses its voice to engage 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.

Primary reason	Relevance & inclusion					
-						
Other: Property & Catastrophe Reinsurance	Climate Scenario Analysis Overview and Context:  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, includin 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.					
	Description and Relevance of the Time Horizon: The third-party model has the capabilities to provide long-term climate event horizons based on specific modeling 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.					
	Details of the Methodology Used: 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.					
	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.					
	Analytical Methods - Great-West Lifeco applies the Monte Carlo simulation methodology to clients' exposure files.					
	Changes from the reference scenario considered - Based 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 2017.					
	The Area of the Organization considered for the Scenario Analysis: The scenario analysis is considered for Great-West Lifeco's Property and Catastrophe portfolio, which is used by the Great-West Lifeco Reinsurance Division.					
	Company Specific Description of the Results of Conducting Scenario Analysis:  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 wind storms, hurricanes and cyclones) in the areas of its reinsurance business were coverable by the allocated available capital.					
	Description of How the Results of the Scenario Informed and Directly Influenced the Business Objectives and Strategy: 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, in 2017, Great-West Lifeco established reserves of \$175 million for claims relating to losses from hurricanes Harvey, Irma and Maria combined in the third quarter of the year which did not result in a substantive impact to the business.					



# 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	% reduction from base year	Base year	Start year	Base year emissions covered by target (metric tons CO <sub>2</sub> e)	Target year	Is this a science- based target?	% achieved	Target status	Please explain
Abs1 PFC	Scope 3 (location- based)	0.04%	8.0%	2011	2012	62	2020	No, but we anticipate setting one in the next 2 years	62.5%	Underway	This target relates 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 (62.5% towards target completion) 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	% reduction from base year	Base year	Start year	Base year emissions covered by target (metric tons CO <sub>2</sub> e)	Target year	Is this a science- based target?	% achieved	Target status	Please explain
Abs2 Lifeco	Scope 1+2 (location- based)	36.8%	27.3%	2013	2014	21,297	2025	No, but we anticipate setting one in the next 2 years	77.5%	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 the corporate head office and investment properties. The reductions achieved todate (77.5% 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	% reduction from base year	Base year	Start year	Base year emissions covered by target (metric tons CO <sub>2</sub> e)	Target year	Is this a science- based target?	% achieved	Target status	Please explain
Abs3 Lifeco	Scope 1+2 (location- based)	36.8%	50.4%	2013	2014	21,297	2036	No, but we anticipate setting one in the next 2 years	42.0%	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 (42.0% 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	% reduction from base year	Base year	Start year	Base year emissions covered by target (metric tons CO <sub>2</sub> e)	Target year	Is this a science- based target?	% achieved	Target status	Please explain
Abs4 IGM	Scope 1+2 (market- based)	100%	40%	2013	2015	2,332	2020	No, but we anticipate setting one in the next 2 years	100%	Underway	This target (2013-2020) applies to Scope 1 and 2 emissions for IGM Financial's corporate head office in Canada, which includes property-level electricity, natural gas, and refrigerants consumption. Once the Science Based Organization methodology for financial services companies is established, IGM Financial will be exploring the application on its business.
Abs5 IGM	Scope 1+2 (market- based)	100%	50%	2013	2015	2,332	2036	No, but we anticipate setting one in the next 2 years	100%	Underway	This target (2013-2036) applies to Scope 1 and 2 emissions for IGM Financial's corporate head office in Canada, which includes property-level electricity, natural gas, and refrigerants consumption. Once the Science Based Organization methodology for financial services companies is established, IGM Financial will be exploring the application on 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 Energy 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	80%	80%	100%	Under- way	Our subsidiary IGM Financial is accomplishing this goal through an agreement with Bullfrog Power to purchase green natural gas from a 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.	Since IGM Financial's owned office building is located in Manitoba, hydroelectricity 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.	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  $CO_2e$  savings.

Stage of development	Number of projects	Total estimated annual CO <sub>2</sub> e savings in metric tons CO <sub>2</sub> e (only for rows marked *)
Under investigation	7	
To be implemented*	11	860.3
Implementation commenced*	8	343.9
Implemented*	23	1,532
Not to be implemented	1	

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

Activity type	Description of activity	Estimated annual CO <sub>2</sub> e savings (metric tons CO <sub>2</sub> e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency, as specified in CO.4)	Investment required (unit currency, as specified in CO.4)	Payback period	Estimated lifetime of the initiative	Comment
Energy efficiency: Building services	Other: Multiple energy efficiency retrofits	1,010	Scope 2 (location- based)	Voluntary	\$723,876	\$2,469,099	4-10 years	11-15 years	Great-West Lifeco invested in multiple energy efficiency-focused retrofits at its Canadian owner-occupied and investment properties including lighting retrofits (e.g., T8 to LED conversions), building envelope upgrades (e.g., roof replacements), cooling tower retrofits/rebuilds, continuous (monitoring-based) commissioning projects, and BAS system upgrades. Investment required does not include all energy efficiency projects that resulted in annual monetary savings. Annual monetary savings are estimated and pertain to Canadian owner-occupied and investment properties.

Activity type	Description of activity	Estimated annual CO <sub>2</sub> e savings (metric tons CO <sub>2</sub> e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency, as specified in CO.4)	Investment required (unit currency, as specified in CO.4)	Payback period	Estimated lifetime of the initiative	Comment
Energy Efficiency: Building Services	Lighting	0.4	Scope 2 (location- based)	Voluntary	\$13,322	\$353,000	Greater than 25 years	21-30 years	Installation of automated system to turn lights off after business hours which will contribute to meeting IGM Financial's target to reduce Scope 1 and 2 GHG emissions by 40% by 2020 and 50% by 2036.
Other: Leased space consolidation		522	Scope 3	Voluntary	\$2,900,000	0	<1 year	Ongoing	More efficient use of IGM Financial's leased office space across Canada.

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

Method	Comment
Dedicated budget for energy efficiency	As part of our commitment to continuously reduce our limited carbon and energy impacts, our parent company Power Corporation has in place a dedicated budget for carbon reduction projects. A majority of this budget has been dedicated to maintaining the BOMA BEST® certification and initiatives undertaken to achieve LEED EB 2009 certification at the Corporation's head office building, which include retrofits and building upgrades.
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 2017, Great-West Lifeco dedicated over CA\$7 million to energy efficiency-focused projects within its international owner-occupied property portfolio.
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 2017, 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 co-ordinate 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.

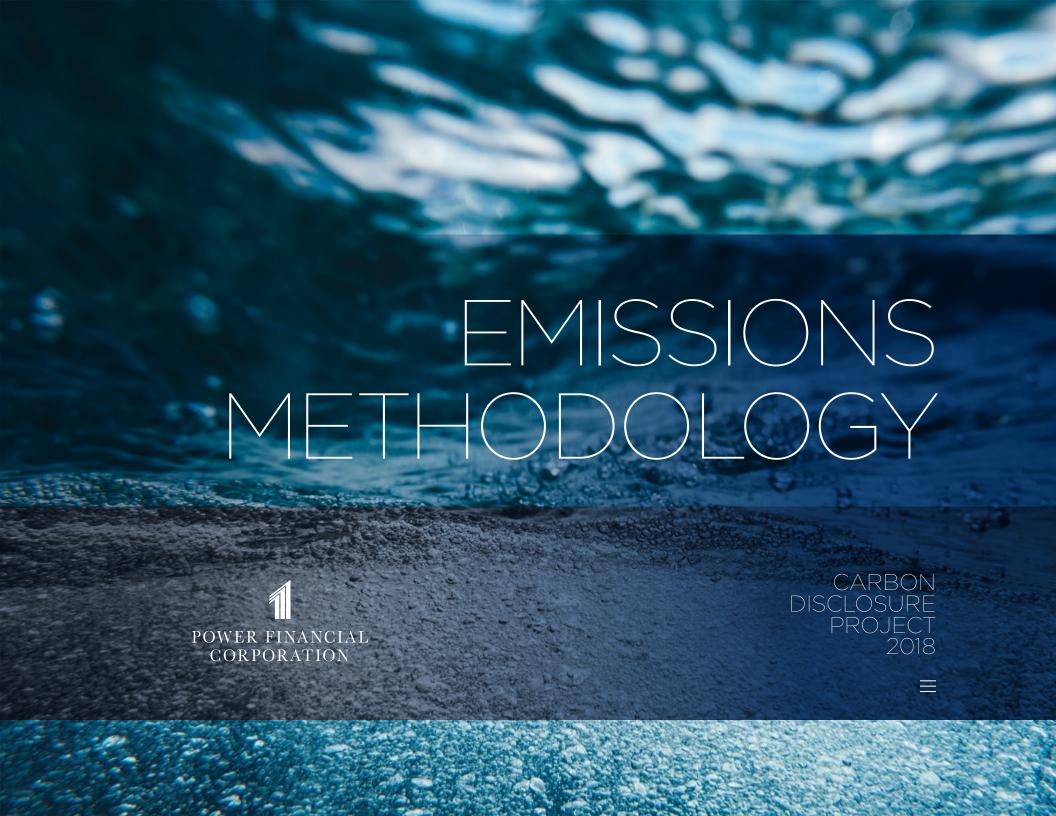
### Low-carbon products

(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) Please 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 certifications	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.



# C5 Emissions methodology

#### Base year emissions

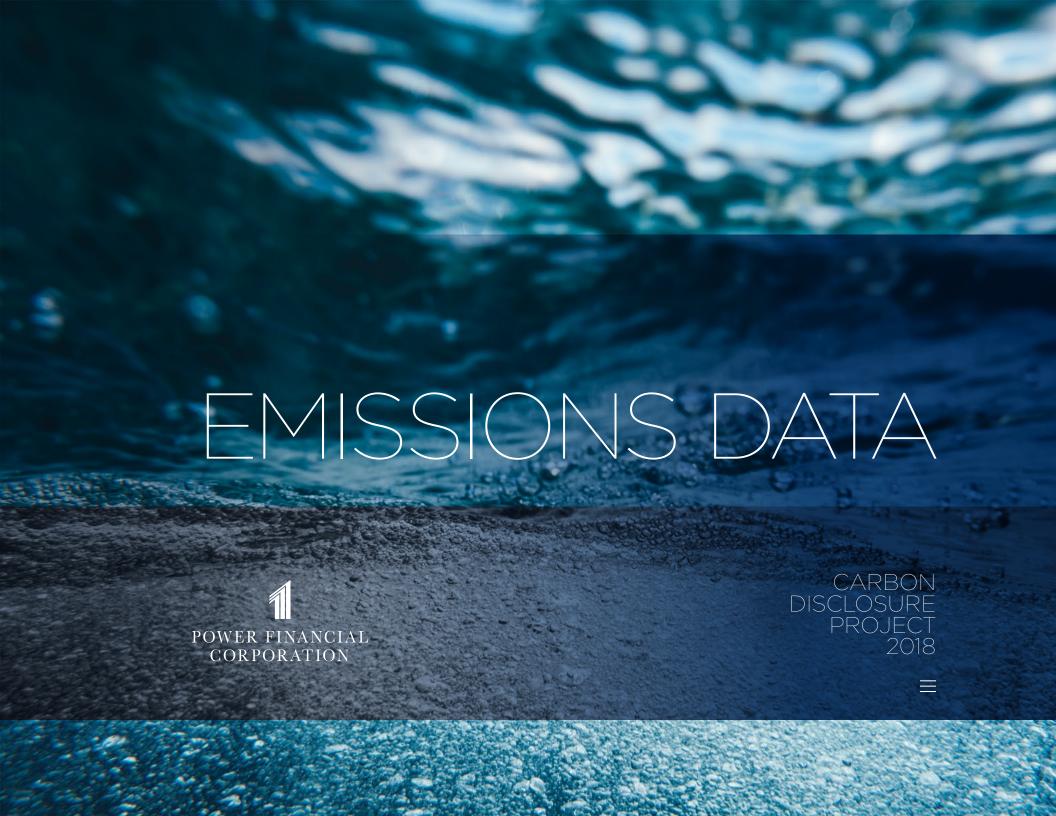
(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope	Base year start	Base year end	Base year emissions (metric tons CO <sub>2</sub> e)	Comment
Scope 1	01/01/2013	31/12/2013	19,791	N/A
Scope 2 (location-based)	01/01/2013	31/12/2013	40,411	N/A
Scope 2 (market-based)	01/01/2013	31/12/2013	40,411	N/A

### 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)



## C6 Emissions data

## Scope 1 emissions data

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO<sub>2</sub>e?

15,592

### 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 tons CO<sub>2</sub>e?

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment		
33,456	33,456	Our location-based and market-based Scope 2 emissions are the same since no renewable energy credits (REC) have been purchased.		

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

No

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

Sources of Scope 3 emissions	Evaluation status	Metric tons CO <sub>2</sub> 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	1,820	Weight of paper purchased was multiplied by appropriate emission factors based on % post-consumer content.	100%	These emissions relate to the procurement of office paper for Great-West Life corporate properties. 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 anticipated Scope 3 emissions.
Fuel-and- energy-related activities (not included in Scope 1 or 2)	Not relevant, explanation provided		N/A	N/A	Scope 3 fuel- and energy-related emissions are from Great-West Lifeco's and IGM Financial's leased or investment properties only and are reported below under downstream leased assets and investments.
Upstream transportation and distribution	Not relevant, calculated	262	The emissions were calculated based on the distribution of water for consumption in Great-West Lifeco's corporate buildings, using provincial emission factors and electricity consumption required for water distribution.	100%	These emissions relate to the transport and distribution of water that Great-West Lifeco purchases for its corporate buildings. Given the nature of our business, we do not consider upstream transportation and distribution to contribute significantly to our total anticipated Scope 3 emissions.

Sources of Scope 3 emissions	Evaluation status	Metric tons CO <sub>2</sub> 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	3,723	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.	100%	This includes emissions related to the waste generated at our leased corporate head office, as well as those 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 anticipated Scope 3 emissions.
Business travel	Relevant, calculated	18,980	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 anticipated 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 anticipated Scope 3 emissions.
Upstream leased assets	Not relevant, calculated	119	N/A	100%	This includes emissions related to electricity, natural gas and waste generated at the corporate properties of our parent company Power Corporation which is leased by Power Financial.
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 anticipated Scope 3 emissions.

Sources of Scope 3 emissions	Evaluation status	Metric tons CO <sub>2</sub> e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
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.
Downstream leased assets	Not relevant, calculated	14,986	Energy, water and waste data collected from leased properties was multiplied by appropriate emissions factors provided by Environment Canada, National Inventory Report 1990-2015.	100%	These emissions include the downstream leased assets of Power Financial, Great-West Lifeco and IGM Financial and relate to the energy, water and waste from Canadian leased properties.
Franchises	Not relevant, explanation provided		N/A	N/A	We do not own any franchises.
Investments	Relevant, calculated	89,019	Energy, water and waste data from segregated investment fund properties was multiplied by appropriate emissions factors provided by Environment Canada, National Inventory Report, 1990-2015.	100%	These emissions cover energy, water and waste for Great-West Lifeco's investment property fund emissions in Canada.

Sources of Scope 3 emissions	Evaluation status	Metric tons CO <sub>2</sub> e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
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 tons 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
0.000001	49,047	Unit total revenue	49,878,000,000	Location -Based	5.8%	Decrease	Power Financial revenues increased by 1.54% and its GHG emissions decreased by 2,258 tCO <sub>2</sub> e, in part due to emission reduction activities, including energy efficiency measures.
1.92	49,047	Full time equivalent (FTE) employee	25,526	Location -Based	0.52%	Decrease	Employee count at the Power Financial Group decreased by 3.8% while emissions decreased by 2,258 tCO <sub>2</sub> e in part due to emission reduction activities, including energy efficiency measures.
0.00545	49,047	Square foot	8,996,477	Location -Based	4.4%	Decrease	Power Financial's square footage remained the same, while GHG emissions decreased by 2,258 tCO <sub>2</sub> e, in part due to emission reduction activities, including energy efficiency measures.



## C7 Emissions breakdown

### Scope 1 breakdown: GHGs

(C7.1) Does your organization have greenhouse gas emissions other than carbon dioxide?

Yes

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

Greenhouse gas	Scope 1 emissions (metric tons of selected GHG, in CO <sub>2</sub> e)	GWP Reference
CO <sub>2</sub>	15,304	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	8.4	IPCC Fourth Assessment Report (AR4 - 100 year)
N <sub>2</sub> O	79.4	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	200.0	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 tons CO₂e)
Canada	10,513
United States	1,261
United Kingdom	569
Ireland	3,249

#### (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 tons CO <sub>2</sub> e)	Latitude	Longitude
Oliver Village	1,005	53.547272	-113.518677
Concord Tower	307	45.504671	-73.56775
Oxbridge Place	533	53.536013	-113.50512
670 Sovereign Road	258	43.008638	-81.154967
255 Dufferin Avenue	886	42.987168	-81.249506
City Centre Plaza	42	43.596015	-79.641717
Canada Life Place	327	50.448355	-104.612709
180 Queen St	367	43.650747	-79.389931
190 Simcoe St	18	43.651552	-79.390712

Facility	Scope 1 emissions (metric tons CO <sub>2</sub> e)	Latitude	Longitude
330 University	6	43.651758	-79.389572
180 Simcoe St	115	43.651184	-79.39046
College Park	1,483	43.660711	-79.38626
Yonge Richmond Centre	444	43.651497	-79.38066
455 René-Lévesque	0	53.517815	-113.49808
433 Main	501	49.28078	-123.101865
560 Broadway	23	49.885343	-97.154095
Winnipeg Data Center	0	49.875361	-97.042264
GWL Centre	1,879	49.879174	-97.146911
Block 1, Irish Life Centre	272	53.349264	-6.255672
Block 2, Irish Life Centre	248	53.349461	-6.254703
Block 3A-3B, Lower Abbey Street	1,036	53.349772	-6.255334
Block 4, Irish Life Centre	53	53.350347	-6.25571
Block 5/6, Irish Life Centre	141	53.350274	-6.256308
Block 7, Irish Life Centre	95	53.349669	-6.256113
Block A/B, Abbey Court	79	53.349023	-6.256886
Block C, Abbey Court	256	53.34922	-6.257573
Block D/E/F, Abbey Court	483	53.349494	-6.257114
Beresford Court, Beresford Place	243	53.348918	-6.255389
Irish Life Centre (Public Car Park)	322	53.349889	-6.25654
Block 1 Christchurch Square	10	53.342624	-6.272535
Block 2 Christchurch Square	11	53.342782	-6.272558

Facility	Scope 1 emissions (metric tons CO <sub>2</sub> e)	Latitude	Longitude
Great-West Financial Centre - Tower I	114	39.610576	-104.89244
Great-West Financial Centre - Tower II	307	39.61067	-104.89168
Great-West Financial Centre - Tower III	305	39.609958	-104.890738
Great-West Financial Centre - North Building	524	39.611685	-104.890513
Great-West Financial Centre - Parking Garage No. 1	7	39.610677	-104.890684
Great-West Financial Centre - Parking Garage No. 2	4	39.611449	-104.889832
Canada Life Place UK	205	51.693241	-0.179321
Maple House	100	51.692877	-0.179663
Lombard Street	247	51.51284	-0.088884
Canada Life Residential Flats	16	51.692855	-0.178693
Other	2,320		

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

Activity	Scope 1 emissions (metric tons CO₂e)
Other	2,320
Natural Gas	11,268
Diesel (Back up Generator)	94
Refrigerants	200
Vehicle Fuels	1,709

## 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 tons CO <sub>2</sub> e)	Scope 2, market-based (metric tons CO₂e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Canada	8,721	8,721	122,807	116,734
United States	16,440	16,440	26,325	
United Kingdom	2,152	2,152	6,120	
Ireland	6,143	6,143	12,647	

## 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 tons CO <sub>2</sub> e)	Scope 2, market-based (metric tons CO <sub>2</sub> e)
Oliver Village	848	848
Concord Tower	308	308
Oxbridge Place	1,880	1,880
670 Sovereign Road	60	60
255 Dufferin Avenue	383	383
City Centre Plaza	152	152
Canada Life Place	1,471	1,471
180 Queen St	171	171
190 Simcoe St	1,011	1,011
330 University	374	374
180 Simcoe St	180	180
College Park	1,586	1,586
Yonge Richmond Centre	206	206
455 René-Lévesque	10	10
433 Main	9	9

Facility	Scope 2, location-based (metric tons CO <sub>2</sub> e)	Scope 2, market-based (metric tons CO <sub>2</sub> e)
560 Broadway	1	1
Winnipeg Data Center	28	28
GWL Centre	34	34
Block 1, Irish Life Centre	813	813
Block 2, Irish Life Centre	445	445
Block 3A-3B, Lower Abbey Street	1,431	1,431
Block 4, Irish Life Centre	131	131
Block 5/6, Irish Life Centre	350	350
Block 7, Irish Life Centre	231	231
Block A/B, Abbey Court	113	113
Block C, Abbey Court	361	361
Block D/E/F, Abbey Court	685	685
Beresford Court, Beresford Place	411	411
Irish Life Centre (Public Car Park)	962	962
Block 1 Christchurch Square	114	114
Block 2 Christchurch Square	96	96
Great-West Financial Centre - Tower I	4,424	4,424
Great-West Financial Centre - Tower II	4,424	4,424
Great-West Financial Centre - Tower III	2,766	2,766
Great-West Financial Centre - North Building	4,301	4,301
Great-West Financial Centre - Parking Garage No. 1	261	261

Facility	Scope 2, location-based (metric tons CO₂e)	Scope 2, market-based (metric tons CO₂e)
Great-West Financial Centre - Parking Garage No. 2	265	265
Canada Life Place UK	1,294	1,294
Maple House	286	286
Lombard Street	568	568
Canada Life Residential Flats	4	4
One Canada Place Head Office	8	8

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

Activity	Scope 2, location-based (metric tons CO <sub>2</sub> e)	Scope 2, market-based (metric tons CO₂e)
Electricity	32,334	32,334
Steam	1,121	1,121

### 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 tons CO <sub>2</sub> e)	Direction of change	Emissions value (percentage)	Please explain calculation
Other emissions reduction activities	-326	Decrease	-0.64%	In 2017, we decreased our Scope 1 and 2 GHG emissions by 0.64% based on the reduction activities at Great-West Lifeco and IGM Financial. As a result of these emission reduction activities, our total Scope 1 and 2 emissions were reduced by 326 tCO₂e. We divided this number by 51,305 (the total Scope 1 and 2 emissions in 2016) to achieve an overall 0.64% decrease from emission reduction activities. The calculation is as follows: (-326/51,305)*100 = 0.64%.
Divestment			0.00%	
Acquisitions			0.00%	
Mergers			0.00%	
Change in output	-366	Decrease	-0.71%	In 2017, we decreased our Scope 1 and 2 GHG emissions by 0.71% from a decrease in business travel. As a result, Scope 1 and 2 emissions were reduced by 366 tCO₂e. We divided this number by 51,305 (the total Scope 1 and 2 emissions in 2016) to achieve an overall 0.71% decrease from business travel. The calculation is as follows: (-366/51,305)*100 = 0.71%.
Change in methodology	-374	Decrease	-0.73%	In 2017, we decreased our Scope 1 and 2 GHG emissions by 0.73% from a change in emission factors. As a result, Scope 1 and 2 emissions were reduced by 374 tCO $_2$ e. We divided this number by 51,305 (the total Scope 1 and 2 emissions in 2016) to achieve an overall 0.73% decrease from emission factors. The calculation is as follows: $(-374/51,305)*100 = 0.73\%$ .

Reason	Change in emissions (metric tons CO <sub>2</sub> e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in boundary			0.00%	
Change in physical operating conditions	-1,392	Decrease	-2.71%	In 2017, we decreased our Scope 1 and 2 GHG emissions by 2.71%, resulting from weather and occupancy changes. As a result, Scope 1 and 2 emissions were reduced by 1,392 tCO $_2$ e. We divided this number by 51,305 (the total Scope 1 and 2 emissions in 2016) to achieve an overall 2.71% decrease from weather and occupancy changes. The calculation is as follows: $(-1,392/51,305)*100 = 2.71\%$ .
Unidentified	215	Increase	0.42%	In 2017, we increased our Scope 1 and 2 GHG emissions by 0.42%, resulting from unidentified changes. As a result, Scope 1 and 2 emissions increased by 215 tCO $_2$ e. We divided this number by 51,305 (the total Scope 1 and 2 emissions in 2016) to achieve an overall 0.42% increase from unidentified changes. The calculation is as follows: (215/51,305)*100 = 0.42%.
Other	-13	Decrease	-0.03%	In 2017, we decreased our Scope 1 and 2 GHG emissions by 0.03%, resulting from a decrease in the use of diesel. As a result, Scope 1 and 2 emissions decreased by 13 tCO <sub>2</sub> e. We divided this number by 51,305 (the total Scope 1 and 2 emissions in 2016) to achieve an overall 0.03 decrease from the use of diesel. The calculation is as follows: (-13/51,305)*100 = 0.03%.

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

Location-based



# 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	No
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.

Energy carrier	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (MWh's in LHV)	HHV	5,334	76,424	81,758
Consumption of purchased or acquired electricity	N/A	110,595	51,166	161,761
Consumption of purchased or acquired heat	N/A			
Consumption of purchased or acquired steam	N/A	6,139		6,139
Consumption of purchased or acquired cooling	N/A			
Consumption of self- generated non-fuel renewable energy	N/A			
Total energy consumption		122,068	127,590	249,658

#### (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 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	MWh consumed for the generation of electricity	MWh consumed for the generation of heat	MWh consumed for the generation of steam	MWh consumed for the generation of cooling	MWh consumed for cogeneration or trigeneration
Aviation Gasoline	HHV	8,662	-	-	0	0	0
Diesel	N/A	6,875	-	-	0	0	0
Natural Gas	HHV	66,089	-	66,089	0	0	0
Petrol	N/A	133	-	-	0	0	0

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

Fuels	Emission factor (in units of metric tons CO <sub>2</sub> e per MWh)	Unit	Emission factor source	Comment
Aviation Gasoline	0.00258	metric tons CO <sub>2</sub> e per liter	Environment Canada. Greenhouse Gas Division, National Inventory Report 1990–2015: Greenhouse Gas Sources and Sinks in Canada Part 2. (Ottawa: Environment Canada, 2017.), 240.	The specific emission factors relate to Canadian aviation turbo fuel.
Diesel	0.00279	metric tons CO <sub>2</sub> e per liter	Environment Canada. Greenhouse Gas Division, National Inventory Report 1990–2015: Greenhouse Gas Sources and Sinks in Canada Part 2. (Ottawa: Environment Canada, 2017.), 235, 240.; Greenhouse Gas Inventory Guidance. Direct Emissions from Stationary Combustion Sources. EPA, Jan 2016; Department of Energy and Climate Change, UK Government GHG Conversion Factors for Company Reporting, https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting#conversion-factors-2017	This is an average of Canadian, US and Irish Diesel Emissions factors
Natural Gas	0.00201	metric tons CO <sub>2</sub> e per m <sup>3</sup>	Environment Canada. Greenhouse Gas Division, National Inventory Report 1990-2015 Part 2: Greenhouse Gas Sources and Sinks in Canada. (Ottawa: Environment Canada, 2017.), 234; Greenhouse Gas Inventory Guidance. Direct Emissions from Stationary Combustion Sources. EPA, Jan 2016; Department of Energy and Climate Change, UK Government GHG Conversion Factors for Company Reporting, https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting#conversion-factors-2017	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 <sub>2</sub> e.
Petrol	0.00244	metric tons CO <sub>2</sub> e per liter	EPA, Emissions Factors for Greenhouse Gas inventories (November 2015); Department of Energy and Climate Change, UK Government GHG Conversion Factors for Company Reporting, https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting#conversion-factors-2017	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	MWh consumed associate with low-carbon electricity, heat, steam or cooling	Emission factor (in units of metric tons CO <sub>2</sub> e per MWh)	Comment
Other (Ontario Steam)	Other: Steam	6,139	0.1827	Great-West Lifeco purchases district steam for their Toronto owner- occupied office locations. This source produces lower emissions per MWh compared to traditional fossil fuel-based heating sources.
Other (Manitoba Hydro)	Hydropower	27,242	0.0034	Electricity purchased from Manitoba Hydro for Great-West Lifeco's owner-occupied and investment properties as well as IGM Financial's Head Office in Manitoba comes predominantly (99.6% of grid mix) from low carbon energy sources, such as utility-scale hydro and other renewables.
Other (Ontario Hydro)	Hydropower, Nuclear, Wind, Solar	75,034	0.04	Electricity purchased in Ontario for Great-West Lifeco's owner- occupied and investment properties comes predominantly (85% of grid mix) from low carbon energy sources including utility-scale hydro, nuclear, wind, solar, and other renewables.
Other (Quebec Hydro)	Hydropower	8,319	0.0012	Electricity purchased in Quebec for Great-West Lifeco's corporate property comes predominantly from low carbon energy sources, including hydropower.



# 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	3,589	tCO₂e		0.4%	Decrease	Waste generation from Great-West Lifeco's Canadian Corporate and international properties, which decreased by 13 tCO <sub>2</sub> e from 2016 to 2017.
Other: Segregated Fund Properties	89,019	tCO₂e		2.2%	Decrease	Emissions from Great-West Lifeco's Canadian segregated fund properties, which decreased by 2,030 tCO $_2$ e from 2016 to 2017. This was due to large reductions in electricity usage (2,027 tCO $_2$ e) as well as landfill waste (1,672 tCO $_2$ e). These reductions were countered by a large increase in natural gas (1,454 tCO $_2$ e) which was likely weather related.
Other: Leased Properties	7,900	tCO <sub>2</sub> e		10.3%	Increase	Emissions from Great-West Lifeco's Canadian leased properties, which increased by 738 tCO $_2$ e from 2016 to 2017, largely due to increases in waste emissions (2,242 tCO $_2$ e). This was countered, in part, by a reduction in electricity of 1,521 tCO $_2$ e.
Other: Water	262	tCO₂e		3.4%	Decrease	Water emissions from Great-West Lifeco's Canadian corporate and international properties, which decreased by 9 tCO <sub>2</sub> e from 2016 to 2017.
Other: Business Travel	13,267	tCO₂e		14.7%	Decrease	Business Travel emissions from Great-West Lifeco, which decreased by 2,277 tCO <sub>2</sub> e from 2016 to 2017, due to reductions in car travel (278 tCO <sub>2</sub> e), air travel (983 tCO <sub>2</sub> e) and rail travel (19 tCO <sub>2</sub> e).

Description	Metric value	Metric numerator	Metric denominator (intensity metric only)	% change from previous year	Direction of change	Please explain
Other: Paper	1,820	tCO₂e		13.1%	Decrease	Paper emissions from Great-West Lifeco, which decreased by 274 tCO <sub>2</sub> e from 2016 to 2017 due to a decrease in paper usage at its Canadian corporate offices.
Energy Usage	235,536,494	KWH		4.0%	Decrease	Absolute energy usage at Great-West Lifeco's corporate properties, which decreased by 9,795 MWH from 2016 to 2017 largely due to reductions in electricity usage of 8,315 MWH and jet fuel of 1,666 MWH.
Energy Usage	27.12	KWH	Square feet	12.1%	Decrease	Decreases in electricity and jet fuel usage (primarily) at Great-West Lifeco resulted in a reduction in energy Intensity in the corporate properties, which decreased by 12% or 3.75 kWh/ft² from 2016 to 2017.
Other: Water Consumption	580,711	m³		4.5%	Decrease	Great-West Lifeco's water consumption decreased by 27,188 m³ from 2016 to 2017 as a result of a 5.4% decrease in its Canadian corporate properties consumption and a 37.8% decrease in Canada Life UK's water usage.
Other: Water Use Intensity	67	litres	Square feet	12.6%	Decrease	Great-West Lifeco's water use Intensity decreased by 10 litres/ft² from 2016 to 2017, due to the reduction in consumption at both the Canadian corporate and Canada Life UK properties. In addition, there was an increase in area between 2016 and 2017 of 737,401 ft².
Other: Waste to Landfill	2,264	metric tonnes		0.8%	Increase	Great-West Lifeco's total waste generation increased by 17 metric tonnes from 2016 to 2017, due to a 16% increase from its US properties and a 32.1% increase from its UK properties. Waste to landfill decreased by 172 tonnes, while waste to waste-to-energy plants increased by 189.2. From the company's research and discussions with Canadian waste-to-energy plants, waste to energy emissions are significantly lower than those emitted from landfills.
Other: Waste Diversion Rate	52	Percent		15.0%	Decrease	Great-West Lifeco's waste diversion rate decreased from 2016 to 2017 due to a reduction in recycling from its US properties of 17.6 tonnes, alongside an increase in waste

Description	Metric value	Metric numerator	Metric denominator (intensity metric only)	% change from previous year	Direction of change	Please explain	
						generation of 37 tonnes. Likewise, Great-West Lifeco's UK properties reduced recycling by 67.4 tonnes while increasing waste by 21 tonnes.	
Waste	134	tCO₂e		32.7%	Decrease	Waste generation from IGM Financial's Head Office decreased by 65 tCO <sub>2</sub> e from 2016 to 2017. Waste was previously estimated and is now measured more accurately.	
Other: Leased Properties	7,086	tCO <sub>2</sub> e		3.5%	Increase	Emissions from IGM Financial's leased portfolio increased by 240 tCO $_2$ e from 2016 to 2017, largely due to an increase in natural gas emissions (363 tCO $_2$ e), which was likely weather related. This was countered in part by a reduction in electricity of 121 tCO $_2$ e.	
Other: Water	0.11	tCO <sub>2</sub> e		29.5%	Decrease	Water emissions from IGM Financial's Head Office decreased by 0.04 tCO₂e from 2016 to 2017.	
Other: Business Travel	3,081	tCO <sub>2</sub> e		16.7%	Decrease	Business Travel emissions from IGM Financial decreased by 618 tCO <sub>2</sub> e from 2016 to 2017, due to the introduction of an online training environment, thereby requiring less air travel by employees and advisors.	
Waste	60	tCO <sub>2</sub> e		17.9%	Decrease	Waste from Power Financial's leased corporate office decreased by 13 tCO <sub>2</sub> e in 2017 due to normal business fluctuations.	
Business Travel	93	tCO₂e		2.5%	Decrease	Power Financial's business travel (air) emissions decreased by 2 tCO <sub>2</sub> e in 2017 due to normal business fluctuations.	
Energy Usage	59	tCO₂e		6.3%	Decrease	Energy (electricity and natural gas) usage in Power Financial's leased corporate office decreased in 2017 resulting in a reduction in emissions of 4 tCO <sub>2</sub> e due to various initiatives.	
Other: Corporate Air Travel	2,540	tCO₂e		8.6%	Increase	Corporate travel at Power Financial increased by 201 tCO <sub>2</sub> e from 2016 to 2017 due to normal fluctuations in business needs.	



# C10 Verification

# Verification

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

Scope	Verification/assurance stats
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.



# C11 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

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

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes CO <sub>2</sub> e)	Number of credits (metric tonnes CO <sub>2</sub> 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 ton)	Variance of price used	Type of internal carbon price	Impact and Implication
Navigate GHG regulations  Stakeholder expectations	Scope 1 Scope 2	The price is applied to all Great-West Lifeco owner-occupied and investment properties in Canada through its subsidiary GWL Realty Advisors.	CAD 30/ tCO₂e	CAD 30-50/ tCO <sub>2</sub> e 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 CO <sub>2</sub> e 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".	Implicit price	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, it will be exploring how to integrate carbon costs into the investment decision- making process for its retrofit (and other) projects.



# 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
Collaboration & Innovation (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
Other	Compliance & onboarding	2%	13%	100%	Great-West Lifeco engages with select suppliers of products and services that can reduce the environmental footprint of its buildings, operations and processes. This includes suppliers that support them in improving the sustainability of their 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). Working collaboratively with these suppliers to encourage alternative and green products and services enables the company to meet its green building certification targets as well as its 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.  Please note that the data provided for this question relates to Great-West Lifeco's Canadian operations only.	By engaging with suppliers to provide products and services that reduce its environmental footprint, Great-West Lifeco has achieved its green building certification targets for its corporate head offices and investment properties. Specifically, as of 2017, 88% of Great-West Lifeco's Canadian real estate portfolio by floor area has achieved a green building certification (BOMA BEST® and/or LEED®).  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 2017, they achieved a 77.5% reduction in Scope 1 and 2 GHG emissions since 2013, which surpasses their target of 27.3% GHG reduction by 2025 for Canadian properties.	Based on Great-West Lifeco's response to question 6.5, the company engages with 100% of its Scope 3 suppliers, which includes waste management companies, water utilities, paper suppliers, and corporate travel suppliers who provide the necessary information for Great-West Lifeco to calculate its 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
Information collection (understanding supplier behavior)	Other: Included in supplier management	30	48	100	In 2016 and 2017, IGM Financial's subsidiary, Investors Group, engaged with its Advisors to better understand the importance of environmental management issues in the business processes and investment funds through a Corporate Responsibility and Diversity Survey.	The engagement allowed the company to better understand the importance of climate change and environmental issues, from the perspective of Investors Group Advisors. The measure of success was the number of survey respondents that exceeded prior surveys.	The percentage of suppliers relates to the total Investor Group Advisors that were sent the survey.

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

Type of engagement	Details of engagement	Size of engagement	% 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 your climate change performance and strategy	100%	100%	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 endeavor 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.  GWLRA commercial and multiresidential property managers continue to engage tenants on topics of interest. 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.  Please note these Scope 3 emissions are specifically associated with the categories "Waste generated in operations" and "Investments" listed in question 6.5.	On an ongoing basis, GWLRA conducts tenant and resident engagement (satisfaction) surveys to inform their continuous improvement efforts at both its 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.  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 2017, GWLRA achieved a 15.6% 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.

Type of engagement	Details of engagement	Size of engagement	% 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 your climate change performance and strategy	0.3%	O%	IGM Financial subsidiary Mackenzie Investments surveyed 2,400 Canadians and 412 advisors through the assistance of Environics and PMG Intelligence to create its 50 Insights campaign.	The survey helped the company better understand investor expectations regarding SRI fund demand, including funds addressing climate impacts. The measure of success will be the company's ability to meet client demand for these products.

(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 emission 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. In 2017, Power Financial and IGM Financial maintained listing status on the FTSE4Good Global Index, and The Global Real Estate Sustainability Benchmark (GRESB) ranked Great-West Lifeco's real estate subsidiary GWL Realty Advisors number one in Canada and in the top 8% of real estate advisory companies around the world for its commitment to sustainable environmental, social and governance (ESG) practices. IGM Financial also maintained its listing status on Sustainalytics' Jantzi Social Index and was named in the top 10 of Corporate Knights' Best 50 Corporate Citizens in Canada. The company improved its ranking to 8th overall in 2017, up from 21st position last year.

#### Other Partners - Great-West Lifeco Engagement with Community Organizations

Method of engagement - Great-West Lifeco engages with 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 issues. For example, in 2017, Great-West Lifeco continued its support for the International Institute for Sustainable Development (IISD). As part of this partnership, Great-West Lifeco was the catalyst funder for the Prairie Climate Centre - a joint venture between the IISD and the University of Winnipeg. The Centre provides research, advice and policy development on climate change.

#### 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 environmental, social and governance 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. IGM Financial's subsidiary, Investment Planning Counsel also uses the services of ISS to enhance its engagement on ESG issues, including climate change.

Strategy for Prioritizing Engagements - IGM Financial will prioritize engagements where there may be material climate-related issues. For example, Mackenzie Investments engaged with TransAlta in 2017 to understand its strategy to transition away from coal-fired power capacity. This engagement was driven by the Government of Alberta's mandate to end coal-fired power generation by 2030.

The Mackenzie Investments team engaged with TransAlta to better understand their timeline for conversion, influence a quicker conversion timeline to maximize environmental benefits of the conversion, recognizing that carbon emissions are almost halved and particulate emissions are effectively eliminated from converted generation. In 2017, members of the team discussed these issues with the CFO and Treasurer, and had a follow-up meeting with the Chairman and a Director of the Board.

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 these discussions, TransAlta issued a press release on March 1, 2018, indicating it had strengthened its environmental commitment specifically stating: "everything we do in 2018 will move us closer to 100% clean power by 2025."

# 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, 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. Through our involvement, we support efforts being taken to develop effective, pragmatic policies for addressing national and global issues including energy and environmental issues.

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
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.
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	nalyst (CFA) Consistent ethics, market integrity, and prof		As members of the CFA Institute, Great-West Lifeco is supporting and increasing its own knowledge of climate risks.

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?	
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).		

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, 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.

#### (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:

- 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 Corporation supports the Foundation's broad mission and work with governments,
  businesses and individuals to conserve the environment by providing science-based education, advocacy and policy work, and acting
  as a catalyst for social change.
- One Drop Foundation Power Corporation provided funding to the Foundation covering an eight-year period, beginning in 2011. Its projects in developing countries attempt to provide access to water, ensure food security, and use arts and culture to educate local communities on issues concerning water and climate 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 impacts and management.

We also invest in companies that share our philosophy and values, supporting a wide array of causes, including organizations promoting environmental stewardship and climate change. Our major 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 Great-West Lifeco and IGM Financial:

#### <u>International Institute for Sustainable Development (IISD) - Great-West Lifeco</u>

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 - Through its engagement with the IISD, Great-West Lifeco is supporting coordinated research, advice and policy development on climate change. The IISD and the University of Winnipeg established the Prairie Climate Centre to provide leadership on climate adaptation issues through climate and data research, communication and outreach, and planning and development. In 2016, the company's continued support of the IISD helped to launch the Prairie Climate Atlas. The Centre facilitates cutting-edge climate research and policy recommendations, helping governments, businesses and community members understand the impacts of climate change and respond effectively. In 2017, the Prairie Climate Centre released an internationally recognized research series, *Building a Climate-Resilient City*, which outlines innovative risk management approaches that can help cities adapt to climate change and ensure communities are safe and healthy for families. Throughout the year, their expert advice continued to shape key policy decisions by government and business, including assisting the Government of Manitoba in holding consultations and developing its Climate and Green Plan.

#### <u>EcoPass/Allego/VIP Public Transit Incentive Program - IGM Financial</u>

Method of Engagement - IGM Financial engages through partnership agreements with various city transit organizations to incentivize the use of public transport for their employees to enable carbon reductions from their travel to and from work. Specifically, the company has partnership agreements between Investors Group and Winnipeg Transit and the Montreal Metropolitan Transit Agency. In addition, Mackenzie Investments and Investment Planning Council have partnerships 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 with these organizations, 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 expect to reduce the use of its employees' personal vehicles, which ultimately reduce their carbon emissions. In 2017, IGM Financial estimated that the use of public transit by its employees saved approximately 730 tonnes of CO<sub>2</sub> emissions compared to employees taking their own personal vehicles to work every day.

(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.

## (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?

Publication	Status	Attach the document	Content Elements
In mainstream reports	Complete	Power Financial 2017 Annual Report	Governance Strategy Risks and Opportunities
In voluntary communications	Complete	Power Financial CSR website - Data Supplement	Emissions Figures
In voluntary communications	Complete	Power Financial CSR website - Energy and Carbon Efficiency	Strategy Emission targets
In mainstream reports	Complete	Great-West Lifeco 2017 Annual Report	Risks and Opportunities
In voluntary communications	Complete	Great-West Lifeco 2017 Public Accountability Statement	Strategy Emission targets Emission figures Other metrics
In voluntary communications	Complete	Great-West Lifeco CSR website	Emission figures
In mainstream reports	Complete	IGM 2017 Annual Report	Strategy
In voluntary communications	Complete	IGM CSR website - CSR approach	Governance Strategy Emission figures
In voluntary communications	Complete	IGM CSR website - library	Governance Strategy Emissions figures
In voluntary communications	Complete	Pargesa CSR website	Strategy
In mainstream reports	Complete	Group Bruxelles Lambert 2017 Annual Report	Strategy
In mainstream reports	Complete	Imerys 2017 Annual Report	Governance Strategy
In voluntary communications	Complete	Imerys 2017 Sustainable Development Report	Strategy Emission targets Emission figures
In voluntary communications	Complete	Imerys website - Sustainable development section	Strategy Emission targets Emission figures
In voluntary communications	Complete	GWL Realty Advisors 2017 Annual Review	Strategy Emission targets Emission figures



# 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 Co-Chief Executive Officer	Chief Executive Officer (CEO) President