CIBC

Accelerating climate action
2021 Task Force on Climate-related Financial Disclosures (TCFD) Report

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Message from the CRO

Climate change is one of the most multi-dimensional challenges of our generation, and preparing for and adapting to its impacts are critical to managing risk for communities, businesses and ecosystems.

The impacts of climate change are far reaching. Natural disasters including wildfires and flooding are becoming more frequent and more severe. Companies in sectors associated with high greenhouse gas (GHG) emissions will be faced with transition risks, such as policy and market risks, as the world transitions to net-zero in an attempt to limit global warming.

For this reason, in 2021, we announced our ambition to achieve net-zero emissions in our own operations and financing activities by 2050. We also joined the UN-convened Net-Zero Banking Alliance along with other global banks representing more than 40% of banking assets[1], to combine near-term action with accountability by setting ambitious interim targets.

To reduce the carbon intensity of our financed emissions, we have set 2030 interim targets for our oil and gas sector. Recognizing the scale and urgency of climate change, we intend to set interim targets for an additional sector before the end of 2022.

To reduce our own footprint, we set a goal to reduce emissions by 30% by 2028 (2018 baseline) and have already achieved a 20% reduction, or 66% of our target. For emissions we cannot eliminate through efficiency and reduction initiatives, we have set a goal to achieve carbon neutrality in our global operations and source 100% of our electricity from renewable sources by 2024.

While we expect our approach for managing climate risks to evolve as data quality and availability improves to adequately assess these complex risks over time, we can't delay on taking meaningful action. Just as we are committed to building skills in scenario analysis and determining the resilience of our clients on climate-related credit risk, we are equally focused on leveraging opportunities and developing products and services to support our clients as they address challenges resulting from climate change. This stewardship supports risk mitigation in our own business.

Notably, our Capital Markets teams are at the forefront of supporting the low-carbon transition by developing new opportunities for our business and for our clients. To support the transition to a low-carbon economy, we committed to mobilize $300 billion towards sustainable financing activities by 2030.

While future climate impacts are uncertain, we are committed to managing climate-related risks and opportunities in our own operations while supporting our clients and helping them thrive in the transition to the low-carbon economy.

Shawn Beber
Senior Executive Vice-President and Chief Risk Officer
CIBC

Introduction

Combating climate change requires coordinated action across all levels of society and we see an opportunity to work alongside our clients, investors and other stakeholders to address this complex problem.

CIBC supports the TCFD's recommendations for globally consistent and comparable climate disclosure. This is our second standalone report which presents information about CIBC's efforts towards aligning our climate disclosure with the TCFD framework.

Released in 2017, the TCFD recommendations set out eleven recommended disclosures around four core areas of Governance, Strategy, Risk Management, and Metrics and Targets, for companies to report material climate-related information. Underpinning the overall disclosure is a set of guiding principles[2] that ensure high-quality, decision-useful information is presented to enable users to fully understand the impacts of climate change faced by an organization. Clear, comprehensive data on the impacts of climate change are needed to support informed decisions related to risk pricing, capital allocations and overall business strategy.

Core areas of TCFD disclosure

Governance

Clear oversight of climate-related risks and opportunities are incorporated into a company's governance.

Strategy

Actual and potential impacts of climate-related risks and opportunities are incorporated into business strategy.

Risk Management

Risk management process to identify, assess and manage climate-related risks.

Metrics and Targets

Material metrics and targets are used to assess and manage climate-related risks and opportunities.

Source: TCFD (2021). Overview Booklet.

In 2021, the TCFD published the "Annex" to reflect the evolution of climate-related disclosure and provide both general and sector-specific guidance on implementing the TCFD recommendations.[3]

Our TCFD roadmap

Implementing all of the recommendations of the TCFD is expected to take several years. We have adopted a phased disclosure approach that focuses on continuous improvement over time. We have assessed our progress to-date and have identified areas where we can focus and prioritize our efforts to enhance our future disclosures.

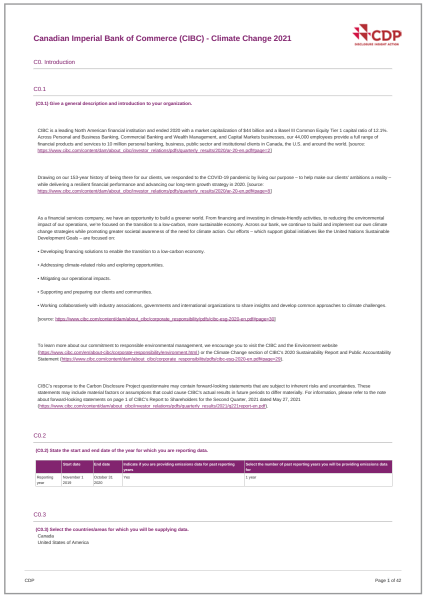
CIBC's TCFD roadmap

Core areas of TCFD disclosure	Disclosure elements	2019 TCFD report: Building a sustainable future	This report	Our next report and beyond
Governance	Board oversight of climate-related matters	●	●	●
	Management's role in assessing and managing climate-related matters	●	●	●
Strategy	Climate-related risks and opportunities identified over the short, medium and long term	◐	●	●
	Impact of climate-related risks and opportunities	◐	◐	◐
	Resilience to climate-related risks using scenario analysis	◐	◐	◐
Risk Management	Process for identifying and assessing climate-related risks	◐	●	●
	Process for managing climate-related risks	○	◐	●
	Integration into risk management framework	○	◐	●
Metrics and Targets	Targets used to manage climate-related risks and opportunities	◐	●	●
	Metrics used to assess climate-related risks and opportunities	◐	◐	●
	Scope 1, 2 and 3 emissions related to operations	●	●	●
	Scope 3 financed emissions	NA	◐	●

○ Not yet disclosed ◐ In progress ● Complete

Building the foundation for climate change leadership

Communicating openly and regularly about our climate-related work is important to CIBC and our stakeholders. Reflecting our commitment to transparency, this report describes how we are working to integrate relevant climate change considerations into our approach to identifying and managing risk and opportunities, and the metrics and targets we are using to measure our progress in order to ensure long-term benefits to CIBC and our stakeholders. Disclosing our approach enables key stakeholders to assess our resilience to climate change. This publication complements our other climate-related disclosures including our annual Sustainability Report[4], which highlights our environmental, social and governance (ESG) strategy and performance, our Net-Zero Approach[5], which describes our approach to setting our first interim net-zero targets related to our financed emissions, and our annual CDP submission[6] on climate-related activity, for which we earned an "A-" in 2021.


Canadian Imperial Bank of Commerce (CIBC) - Climate Change 2021

C0. Introduction

C0.1

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

CIBC is a leading North American financial institution and ended 2020 with a market capitalization of $44 billion and a Basel III Common Equity Tier 1 capital ratio of 12.1%. Across Personal and Business Banking, Commercial Banking and Wealth Management, and Capital Markets businesses, our 44,000 employees provide a full range of financial products and services to 10 million personal banking, business, public sector and institutional clients in Canada, the U.S. and around the world. [source: https://www.cibc.com/content/dam/about_cibc/investor_relations/pdfs/quarterly_results/2020/ar-20-en.pdf#page=2]

Drawing on our 153-year history of being there for our clients, we responded to the COVID-19 pandemic by living our purpose – to help make our clients' ambitions a reality – while delivering a resilient financial performance and advancing our long-term growth strategy in 2020. [source: https://www.cibc.com/content/dam/about_cibc/investor_relations/pdfs/quarterly_results/2020/ar-20-en.pdf#page=8]

As a financial services company, we have an opportunity to build a greener world. From financing and investing in climate-friendly activities, to reducing the environmental impact of our operations, we're focused on the transition to a low-carbon, more sustainable economy. Across our bank, we continue to build and implement our own climate change strategies while promoting greater societal awareness of the need for climate action. Our efforts – which support global initiatives like the United Nations Sustainable Development Goals – are focused on:

• Developing financing solutions to enable the transition to a low-carbon economy.

• Addressing climate-related risks and exploring opportunities.

• Mitigating our operational impacts.

• Supporting and preparing our clients and communities.

• Working collaboratively with industry associations, governments and international organizations to share insights and develop common approaches to climate challenges.

[source: https://www.cibc.com/content/dam/about_cibc/corporate_responsibility/pdfs/cibc-esg-2020-en.pdf#page=30]

To learn more about our commitment to responsible environmental management, we encourage you to visit the CIBC and the Environment website (https://www.cibc.com/en/about-cibc/corporate-responsibility/environment.html) or the Climate Change section of CIBC's 2020 Sustainability Report and Public Accountability Statement (https://www.cibc.com/content/dam/about_cibc/corporate_responsibility/pdfs/cibc-esg-2020-en.pdf#page=29).

CIBC's response to the Carbon Disclosure Project questionnaire may contain forward-looking statements that are subject to inherent risks and uncertainties. These statements may include material factors or assumptions that could cause CIBC's actual results in future periods to differ materially. For information, please refer to the note about forward-looking statements on page 1 of CIBC's Report to Shareholders for the Second Quarter, 2021 dated May 27, 2021 (https://www.cibc.com/content/dam/about_cibc/investor_relations/pdfs/quarterly_results/2021/q221report-en.pdf).

C0.2

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

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	November 1 2019	October 31 2020	Yes	1 year

C0.3

(C0.3) Select the countries/areas for which you will be supplying data.
Canada
United States of America

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Looking ahead, we will work to further build our capabilities in the areas of climate risk management, data integration and climate scenario analysis in line with TCFD recommendations. Our disclosures will evolve and expand as data quality and availability related to performing these assessments improves and as standards for climate risk measurement are developed.

Our multi-year journey to address climate change

2018

- Launched target to reduce intensity of GHG emissions from our operations by 10% by 2023, compared with a 2018 baseline

2019

- Set a target to mobilize $150 billion in sustainable finance activities by 2027
- Issued our first climate report, “Building a Sustainable Future”, aligned to the TCFD framework

2020

- Launched Green Bond Framework with second party opinion from Sustainalytics
- Issued inaugural US$500 million Green Bond
- Committed to source 100% of our electricity from renewable sources and achieve carbon neutrality in our operations by 2024
- Earned an A- rating from CDP for environmental performance and disclosure
- Developed an ESG Index linking ESG targets and performance to compensation

2021

- Announced our Net-Zero ambition for financing and operational activity by 2050
- Joined UN-convened Net-Zero Banking Alliance (NZBA)
- Doubled sustainable finance mobilization commitment to $300 billion by 2030
- Revised our operational GHG target to reduce absolute emissions by 30% by 2028
- Published a Sustainable Issuance Framework
- Published Green Bond Impact Report
- Joined the Partnership for Carbon Accounting Financials (PCAF)
- Announced $100 million in limited partnership investments in climate tech and energy transition investments
- Co-founded Carbonplace – a global platform developed to connect buyers and sellers of voluntary carbon offsets
- Launched a carbon credit scoring methodology to assess climate-related transition risks in our lending

Our multi-year journey to address climate change has accelerated in recent years. We expect to build on this momentum as Accelerating Climate Action is a core pillar in our ESG strategy. Details on this strategy can be found in our 2021 Sustainability Report.

Governance

Our approach to climate governance is to provide oversight and leadership for our climate strategy and risk management frameworks. It is grounded in the principles of defined accountability and effective internal stakeholder engagement.

Across CIBC, strategic business units and functional groups are engaged in climate-related activities to monitor, evaluate and respond to risks and opportunities posed by climate change. To ensure alignment with our broader ESG strategy and emerging stakeholder priorities, there is an established governance structure that includes Board oversight, the role of management in climate-related decisions, and internal accountability for execution across the entire enterprise. Our approach to climate governance outlines not only where responsibility lies, but the distinct roles that different Board committees and management-level business functions play in providing oversight and decision-making on climate-related risks and opportunities.

CIBC's ESG governance framework

Oversight

CIBC Board of Directors

The Board of Directors (Board) has oversight over CIBC's ESG Strategy and how CIBC is measuring, evaluating and monitoring its progress against strategic goals.

Overall ESG Strategy & Engagement	Specific Execution of ESG Elements Based on Mandate		
Corporate Governance Committee	Risk Management Committee	Management Resources Compensation Committee	Audit Committee

Executive Management

Executive Committee

EVP & Chief Legal Officer	SEVP & Chief Risk Officer
Executive horizontal owner of ESG across enterprise.	Executive accountable for climate risk management.

Senior Executive ESG Council

Chaired by the EVP & Chief Legal Officer, the Senior Executive ESG Council's purpose is to align CIBC on delivering against its ESG strategy, evaluating and monitoring progress, and tracking against set commitments.

Execution

Governance & Execution Support

Enterprise ESG Team	Enterprise Risk Management

Cross-Functional ESG Expert Sub-Committee

Strategic Business Unit & Functional Group Committees & Work Groups

Board oversight

The Board delegated to the **Corporate Governance Committee** oversight of our overall ESG strategy and related stakeholder engagement, alignment with our purpose and disclosure on CIBC's ESG practices and performance against targets. This includes oversight of our Climate Transition Plan and net-zero ambition by 2050, as well as other climate-related targets such as our operational GHG reduction target. Other Board committees provide oversight on the execution of specific components of the ESG strategy based on their mandates, and as it relates to responding to climate changes. Examples include:

- The **Risk Management Committee** supervises key frameworks related to CIBC's principal business risks, which include climate-related risks. The Risk Management Committee reviews reports related to climate-related scenario analysis and our approach to identifying and managing climate-related credit risks through the development of a carbon scoring methodology.
- The **Audit Committee** oversees emerging developments and best practices on how ESG is incorporated into CIBC's financial reporting, and internal controls to support the quality of ESG information disclosed.
- The **Management Resources and Compensation Committee** oversees CIBC's compensation framework including alignment of compensation with ESG Index performance, which includes climate-related targets.

Additional details on how climate change is considered in Board oversight can be found in our Management Proxy Circular.

Director Development

Our Director Development Program fosters continuous education for Board members. It helps them stay current with new and emerging governance practices, regulatory developments and evolving ESG issues. During 2021, the Board and its committees dedicated 22% of agenda time to continuing educational sessions, a portion of which was on ESG-related topics such as overseeing ESG in financial institutions. In addition, a new ESG-specific series was initiated, focusing on material ESG trends for financial services, which continues into 2022. Climate-specific topics have included regulators' increased focus on climate-related risk assessments, emerging disclosure standards, and investors' increasing interest in climate-related performance and disclosure.

Management's approach

At the executive management level, our Executive Committee is accountable for the progress of CIBC's ESG agenda, and our President and Chief Executive Officer (CEO) is responsible for setting the right tone company-wide and establishing our ESG priorities. The Senior Executive Vice-President and Chief Risk Officer (SEVP and CRO) has overall responsibility for identifying, assessing and managing climate-related impacts on CIBC, and approves CIBC's frameworks and policies on the identification and control of risks, including climate-related physical and transition risks. The CRO works closely with our Executive Vice-President and Chief Legal Officer (EVP and CLO) who is the executive horizontal owner of ESG across the enterprise, including overseeing our climate strategy, which is a key component of CIBC's ESG Strategy.

ESG-linked compensation

Executives and most team members'[7] compensation is linked to company-wide performance based on the Business Performance Factor (BPF) which includes ESG metrics and goals that comprise 10% of the overall BPF. Achieving our ESG targets is a fundamental component of our incentive funding pool calculation which is approved by the Board of Directors. Climate-related targets are aligned to multi-year commitments for operational GHG emissions reductions, sustainable finance and carbon neutrality. By aligning our incentive compensation awards to our ESG performance in our BPF calculation, we created a direct link between ESG-related criteria and employee and executive compensation.

Senior Executive ESG Council

In 2021, we formed a Senior Executive ESG Council to champion CIBC's refocused ESG strategy and to augment ESG governance at the executive management and decision-making level. The Senior Executive ESG Council is chaired by the EVP and CLO and is comprised of Executive and Senior Vice-Presidents from across the bank, including from Enterprise Risk Management. The Council's main objective is ensuring input received from all strategic business units and functional groups is incorporated into bank-wide ESG initiatives largely related to major strategic initiatives, policy and partnerships, disclosures and impact measurement. This supports enhanced coordination of ESG activities across the bank for the purpose of delivering against the ESG strategy, monitoring progress and tracking against set commitments. The Council will also be leveraged to increase bank-wide education and awareness on ESG topics and trends, and is supported by a broader sub-committee of team members with deep ESG and climate-specific expertise who help drive initiatives across teams, and functional-level and topic-specific committees and working groups with ESG mandates.

Enterprise-wide teams supporting climate action

Environmental Risk is part of Enterprise Risk Management which provides independent oversight of the identification, measurement, monitoring and control of climate-related risks and ensuring climate considerations are incorporated into risk frameworks, policies and risk appetite. The Enterprise Risk team is responsible for:

- Developing scenario analysis skills and techniques used to identify and quantify climate-related physical and transition risks.
- Measuring and disclosing financed emissions related to our lending and investing aligned to PCAF.

An Enterprise ESG team, led by the VP, Enterprise ESG, works alongside other teams and ESG experts across the bank, such as Enterprise Risk, to advance CIBC's ESG agenda, and ensure that climate-related risks and opportunities are integrated into the enterprise ESG strategy.

Cross-functional committees and working groups

To support the methodological development of interim targets for the oil and gas sector related to our Net-Zero Ambition, a cross-functional team made up of Enterprise ESG, Environmental Risk, Sustainable Finance and business leads for specific sectors was assembled. The mandate of this working group was to work through a set of key decisions that ultimately resulted in a financed emissions baseline, interim targets and a detailed methodology. This working group will further develop interim targets for other key sectors.

A Regional Climate Risk Committee ("RCRC") comprising Heads of Business and Infrastructure Risk Heads from the European, Asian and Australian offices, provides a forum for addressing regulatory, strategic and client-related climate risk issues for the Europe and APAC regions. It also acts as a forum for Canadian-based members of the RCRC to understand industry best practices and regulatory expectations from the regions, and for those individuals to communicate bank-wide initiatives and progress to the RCRC.

Strategy

Both present and potential impacts of climate change are influencing CIBC's business, strategy and financial planning.

The Intergovernmental Panel on Climate Change (IPCC) report released in 2021 highlighted the scale and urgency of accelerated climate action, and on the integral role that the global financial system plays in the low carbon transition. The path forward requires substantive transformation and meaningful collaboration between government, industry, communities and individuals, who all play a role in limiting global temperature rise to 1.5°C above preindustrial levels.

We are doing our part to address climate change and consider climate risks in our business strategy by reducing emissions in our operations and financing activities, supporting clients in their transition journeys, and making investments in climate innovations. Our enterprise efforts are guided by our **Climate Transition Plan**, announced in 2021, which includes our **Net-Zero Ambition** to align operational and financing activity to net-zero by 2050.

CIBC's climate transition plan

Supports our ambition to achieve net-zero in our operational and financing activities by 2050, and is guided by four main themes:

Supporting our clients

Encouraging consumer behaviour

Refining our operations

Sharing our progress

Our Climate Transition Plan considers the range of interconnected factors required for the real economy to reach net-zero, and our role within this broader ecosystem as change agents helping to finance activities that align with a low carbon economy, while simultaneously reducing risk in our own operations. This is why a focus of our plan is supporting our clients' transition by mobilizing the necessary capital and developing innovative market-based solutions that promote sustainability through our lending, investment and advisory activities. For example, leveraging our Capital Markets sustainable finance expertise, we have introduced a significant suite of sustainable finance products and services.

- **Green loans:** Our green loans allow borrowers to finance environmentally focused corporate initiatives. These loans are structured to meet the requirements of the Green Loan Principles set out by the Loan Market Association (LMA) along with the Loan Syndications and Trading Association (LSTA) and Asia Pacific Loan Market Association (APLMA). Examples of eligible activities include: renewable energy and energy-efficiency projects, pollution prevention and control, clean transportation, green buildings, and sustainable water and wastewater management.
- **Sustainability-linked loans:** Through these loans, our clients can connect their sustainability strategy and goals to their financing activities. Sustainability-linked loans are structured to allow clients to use the funds for general corporate purposes with the cost of financing linked directly to ESG performance targets, using either key performance indicators (KPIs) or third-party ESG risk ratings. The loans are structured to align with the Sustainability Linked Loan Principles published by the APLMA, LSTA and LMA.
- **ESG bonds:** We advise on the structuring and issuance of ESG bonds, including green bonds, social bonds, transition bonds and sustainability-linked bonds. These bonds give investors new investment opportunities, while helping public and private sector issuers raise capital to fulfil their sustainability strategies. For several years, CIBC has been involved in the green bonds market, holding a portfolio of green bonds and working with clients to originate, structure and execute ESG bonds.

Equally important is the need to encourage consumer behaviour to influence demand. Our Climate Transition Plan prioritizes solutions for clients to integrate climate action into their everyday lives. To support this objective, CIBC recently launched the Climate Centre, an education hub for clients to learn how to minimize GHG emissions by making conscious changes to their living, transportation and investing choices.

To learn more about our sustainable finance, responsible investing, and encouraging consumer behaviour activities related to our Climate Transition Plan see our 2021 Sustainability Report.

Assessing the impacts of climate-related risks

We are actively assessing climate-related risks[8] especially as they affect global economies and may impact our business model. By recognizing and measuring the potential impacts of climate-related risk, we will be better prepared as an organization to manage and mitigate its effects.

Climate-related risks are the potential negative impacts associated with the **transition** to a low-carbon economy and the **physical** impacts of climate change, including extreme weather events and long-term shifts and variability in climate patterns. Climate risk is a "transverse" risk; that is, not a risk in its own right but one that will manifest itself through existing risk channels. Firms can, therefore, use their current risk frameworks to begin to assess the impact of climate change.[9] These risks have the ability to impact business operations, disrupt supply chains, cause physical damage and impact the price of goods and services.

Examples of climate-related risk drivers

Physical risks

Extreme weather

- Flooding
- Drought
- Sea level rise
- Heat stress
- Wind
- Forest Fire

Transition risks

- Policy & Legal
- Technology
- Market
- Reputation

Potential effects of climate risk drivers in our risk channels

- **Credit risk** can increase if the physical and transition risks of climate change impact a client's financial health such as policy and technology impacts on high emitting sectors
- **Strategic risk** arises if we fail to meet clients' changing demands for climate-related products and services
- **Operational risk** increases as extreme weather events impact our ability to operate and disrupt key supply chains on which we depend
- **Market risk** may increase as physical and transition risks impact market factors such as equity and commodity prices
- **Reputational risk** arises from changing stakeholder expectations and perceptions related to CIBC's climate-related actions
- **Liquidity Risk** may increase as our bank's ability to raise funds or liquidate assets may be impacted

Conducting scenario analysis

The TCFD recommendations promote the use of climate scenario analysis for the assessment of a company's resilience to climate-related risks. Scenario analysis is not meant to be a forecast but, rather, it provides a useful "what-if" framework to explore how these risks may manifest in the future. By exploring a range of plausible climate futures under certain conditions and assumptions[10] and assessing the potential risks and opportunities of each, companies can better understand the key drivers that will likely affect their business going forward and adapt their strategies and ambitions accordingly. Scenario analysis is a key element of our risk identification process and allows us to focus effort on the more affected sectors and develop risk-based approaches to quantify and mitigate the impacts of climate change.

Assessing climate risks is more complex and longer term in nature than most traditional business risks, and there is considerable uncertainty as to how future technology, policy and changing consumer demand will impact these risks. Another challenge with effective climate scenario analysis is limited historical data to empirically measure the strength of the climate/credit risk relationship across all sectors.

Our membership in various industry associations and partnerships provides opportunities to share experiences and approaches to scenario analysis across organizations and is critical to advancing both the use and capability of scenario analysis. Industry and regulatory standards for measurement and scenario analysis are still evolving and we will update our approach as this develops.

As we developed our approach, we found that there was limited high-quality available data or industry standards to assess and model the impacts from the physical and transition risks of climate change on lending portfolios. To compensate for this, we used numerous assumptions around the frequency and severity of physical risks and the time horizons and pathways for transition risks.

For example, the preliminary scenarios developed did not take expected mitigants or government actions into account, including:

- Risk transfer through government assistance for physical risk events
- Government policy, litigation, technology changes or disruptive competition
- Proactive management actions that would likely be taken to mitigate losses to the extent feasible

Assessing climate-related risks in business and government lending

We developed a "heatmap" approach for our business and government sectors that reflects the potential physical and transition risk impacts of climate change and applied this to our loan exposures. Heatmaps are an effective tool to identify those sectors that are exposed, directly or indirectly, to increased risks related to climate change and the relative impact of those risks. A heatmap provides a visual representation of the industry sector and the relative sensitivity to climate risk. Those sectors identified as having a significant exposure to climate change were prioritized for deep dive analysis.

Transition risks reflected in our heatmap were assessed using several risk factor pathways based on the UNEP-FI's TCFD Guidance[11] and included:

- Incremental direct and indirect emission costs:
  - Direct includes the change in the carbon price of Scope 1[12] emissions relative to the baseline
  - Indirect includes the change in the cost of energy and non-energy production inputs relative to the baseline
- Incremental low carbon capital expenditure borne by the sector to transition to a low carbon economy
- Incremental revenue from changes in demand under the transition scenario relative to the baseline

Physical risks in our business and government sectors were also based on the UNEP-FI's TCFD Guidance and included the Acclimatise Group's heatmapping framework.[13] Under this approach, sector risk levels are a function of three components:

- **Vulnerability** – captures both direct and indirect physical impacts on investments from a changing climate, accounting for chronic changes as well as extreme events. This includes reliance on natural resources, reliance on secure energy supplies and transport routes, market demand, reliance on labour health and productivity, among other factors.
- **Hazard** – each Vulnerability will have climate variables that may drive negative or positive performance of the indicator. These variables include geospatial data on future changes in climate such as temperature changes, sea level rise, etc.
- **Exposure data** – the geographic presence of segments of the portfolio exposed to hazards.

This standardized approach is evolving and largely based on industry literature and professional judgment. Our portfolio heatmapping output provides useful insight into portfolio and client exposure and helps to identify segments facing higher physical and transition risks.

Where available, internal Climate Scores (refer to Carbon Risk Scoring Methodology under the Risk Management section) are also assessed at the client level to determine ratings. These ratings are summarized below including preliminary assessments of our Business and Government portfolios.

Heatmap assessment

Our analysis identified that not all sectors were impacted equally by climate-related risk. For example, the oil and gas sector is exposed to high physical and transition risks due to operational vulnerability to weather events, possible changes in market demand as electric vehicles achieve mass market adoption and possible regulatory frameworks that aim to establish a price on carbon. Conversely, the physical and transition risks faced by electric utilities vary greatly between sub-sectors. In the case of physical risks, both hydropower and thermal power generation sub-sectors depend on constant water and river levels. However, solar and wind sub-sectors are less vulnerable to climate-related physical risks when compared with other forms of power generation. The transition risk faced by utilities also varies by sub-sector; while traditional sources of power generation (coal, oil, gas) face transition risks, opportunities exist for renewable generation (wind, solar).

Client risk summary - by sector

Sector	Physical rating	Transition rating	Exposure*: C$MM	Exposure: %
Financial Institutions	Moderate	Moderate	187,163	42%
Governments	Moderate	Moderate	85,601	19%
Real Estate and Construction	Moderately High	Moderately High	55,135	12%
Utilities	Moderate	High	28,209	6%
Oil and Gas	High	High	15,931	4%
Retail and Wholesale	Moderately High	Moderately High	12,120	3%
Business and Personal Services	Moderately High	Low	11,253	3%
Transportation	Moderately High	Moderately High	10,889	2%
Agriculture	Moderately High	Moderately High	9,306	2%
Manufacturing - Consumer Goods	Moderately High	High	6,270	1%
Manufacturing - Capital Goods	Moderately High	Moderately High	5,577	1%
Education, Health and Social Services	Low	Low	5,530	1%
Mining	Moderately High	Moderately High	4,903	1%
Telecommunications and Cable	Moderate	Moderate	3,440	1%
Hardware and Software	Low	Low	3,422	1%
Forest Products	High	Low	1,220	0%
Publishing, Printing and Broadcasting	Moderate	Moderate	614	0%
Total	Moderate	Moderate	**446,583**	**100%**

Client risk summary - categories

Risk Level	Definition
Low	Appears to be advanced and well-prepared, or well on their way, to preparing for adaptation; Risk exposure, relative to other sectors, judged to be lower.
Moderate	Exhibit "strong" positioning for both physical and transition risks with a business model in place or have strategies in place that substantially mitigate exposures.
Moderately High	Some uncontrolled exposure to risks of climate change; Effective mitigation practices may exist, however, may not be adequately disclosed.
High	Appears to have significant exposure to climate change; Relative physical and transition risks in comparison to other sectors judged to be higher.

* Includes drawn and undrawn commitments, repo-style transactions, other off-balance sheet and OTC derivatives under the AIRB approach as at October 31, 2021.

Our scenario analysis approach

Our scenario analysis approach involved inferring potential credit migrations based on our heatmap to estimate potential changes in probability of default (PD)[14], expected loss[15] and risk-weighted assets (RWAs)[16]. A key input into our business and government lending risk ratings systems are enterprise value and profitability. These factors would be affected by climate events and thus downgrades (or upgrades) are an intuitive consequence. This analysis assumed that all credits in each of the sectors would be impacted by a similar downgrade (or upgrade). This is unlikely to occur for a number of reasons, including different degrees of resiliency to climate risks across companies, management actions taken to mitigate risks, and facilities in different geographic areas. As such, our results should be considered conservative and not necessarily representative of specific risks to CIBC.

We ran various mild and severe scenarios that were generally aligned to TCFD recommendations such as an immediate and delayed 2°C or lower scenario over a 30-year time horizon. In alignment with TCFD recommendations, we will continue to explore, refine and build out climate change scenarios consistent with the Paris Agreement commitment of limiting global warming to below 2°C, and incorporating some of the most recent developments in the industry and regulatory standards. In particular, we have emphasized the three scenarios developed by the Bank of Canada and the Office of the Superintendent of Financial Institutions (OSFI) as part of their Climate Change Pilot[17]. These 30-year scenarios, similar to the scenarios suggested by the Network for Greening the Financial System, are:

- **Below 2°C immediate** – starting in 2020, collective global action is taken to reduce emissions toward a target of below 2°C by 2050. Early investments, planning and management allow forests to become a small net sink by mid-century.
- **Below 2°C delayed** – after a decade of following 2019 policy frameworks, collective global action to align with a below 2°C target begins in 2030. A steeper transition is needed to make up for the additional decade of a continued rise in emissions. Delayed investments, planning and management prohibit forests from becoming a net sink by mid-century.
- **Net-zero 2050** – starting in 2020, collective global action is taken to reduce emissions toward a 1.5°C target. Current net-zero commitments by some countries, including Canada, are modelled directly in this scenario. Strong early investments enable forests to become a net sink by mid-century.

Our analysis allowed us to compare the impact of the different scenarios over time, across different sectors and draw valuable key observations.

For instance, PD increase at the start of the below 2°C immediate scenario, but do not significantly increase until 2030 in the below 2°C delayed scenario. However, while being deferred, the PD increases are generally much larger and abrupt in the below 2°C delayed scenario, with the potential to cause much larger losses through the entire scenario.

Also, not all sectors respond in the same way to each scenario because they face different pressures and challenges to decarbonize along the transition. For example, under the below 2°C delayed scenario the oil and gas sectors appear to experience some of the largest PD increases due to the fact that these sectors may require large capital investments and are influenced by the increase in direct cost to decarbonize.

It's important to recognize that these scenarios are not forecasts but rather possible future states based on certain actions to achieve a desired outcome. As such, no single scenario or approach may be appropriate for every sector or region of our portfolio.

Our retail approach

Due to data and modelling challenges for our retail portfolios, for which our largest exposure is Real Estate Secured Lending (RESL), we took a different approach similar to actuarial practices for low frequency and high severity risk events, which characterize many physical climate risks. Under this approach, we estimated the frequency and severity of various physical climate risks based on historical data, and combined these in a loss distribution approach (LDA) model to determine the combined loss distribution and computed the resulting expected and unexpected losses at various confidence intervals. Under this approach, resulting expected losses were manageable with floods contributing the most on a standalone basis.

We are also exploring alternative approaches using flood maps and other geo-mapping techniques to determine localized impacts more accurately.

Conclusion

Our analysis provides us with a higher level of granularity to understand how our individual portfolios behave with regard to climate-related risks and where to focus mitigation efforts. Our results are also a useful tool to inform our business decisions towards potential opportunities and areas to support our clients in their climate journey and achieve their net-zero ambitions. We will continue expanding our knowledge, exploring and assessing climate-related risk impacts as industry standards, data quality, tools and our approach mature.

Risk Management

Climate change has the ability to impact many facets of the economy. We expect the future to be increasingly carbon-constrained and, therefore, need to prepare our business and support our clients through the transition.

Climate-related issues are integrated into our core business through our Carbon Risk Management Approach and supporting policies and standards, including our Corporate Environmental Policy, Environmental and Social Credit Risk Management Standards and Procedures, Carbon Risk Scoring Methodology, Responsible Investing Policy and our Environmentally Responsible Procurement Standard. Our policies and procedures are the foundation of our risk management approach and will inform and support our climate risk mitigation efforts.

Carbon Risk Management Approach

Our Carbon Risk Management Approach is used to manage the impacts of climate change on our business operations and those of our clients. The ongoing Carbon Risk Management Approach comprises five key elements:

- Managing carbon emissions from CIBC's operations
- Determining the impacts of climate change regulation on CIBC's lending and investing portfolios
- Tracking and evaluating opportunities in emerging North American carbon markets
- Developing climate risk screening tools in the assessment of overall credit risk
- Assessing the physical and transition impacts of climate change to CIBC's operations and to our lending and investing portfolios

Corporate Environmental Policy

Our Corporate Environmental Policy (Policy) describes our approach to prudent environmental management, including climate-related issues, and assigns responsibilities for managing our environmental impacts. As per the Policy, CIBC is committed to responsible conduct in all of our activities to: (i) protect and conserve the environment; (ii) safeguard the interests of all CIBC stakeholders from unacceptable levels of environmental risk; and (iii) support the principles of sustainable development. The Policy states that CIBC will develop, implement and maintain standards and procedures to review, assess and manage the environmental risks inherent in lending and investment activities and seek through such activities to promote sound environmental management practices among those with whom business is conducted. For example, we have developed a framework to measure our Scope 3[18] financed emissions using the PCAF methodology as well as processes to conduct climate risk scenario analysis and carbon risk scoring of our lending portfolios. Details related to our financed emissions are discussed in the Metrics and Targets section of this report.

Furthermore, our Policy states that we will safeguard CIBC's reputation by not participating in transactions where, determined by CIBC, the counterparty does not address environmental issues in an appropriate and responsible manner. This Policy is publicly available on our website[19].

Environmental and Social Credit Risk Management Standards and Procedures

As an integral part of our due diligence process, we conduct environmental and related social risk assessments of our business lending transactions as per our Environmental and Social Credit Risk Management Standards and Procedures. In addition, to protect the bank from undesired risks, this review process often helps our clients better understand and effectively manage their own risks and liabilities. Our Global Reputational and Legal Risk Policy requires that each credit transaction is examined for potential reputation and/or legal risks, including those of an environmental or a social nature. And when required, our Global Reputation and Legal Risks Committee reviews credit transactions that may impact our reputation, along with transaction structuring.

Furthermore, we perform an enhanced due diligence review for specific sectors where support is limited, such as the construction of new coal-fired power plants. As a further enhancement to our due diligence practices, CIBC has adopted a Thermal Coal Management Protocol for the utilities sector in order to apply a structured evaluation process to complete detailed assessments of our clients' efforts to reduce and/or eliminate thermal coal use and inform the Reputation and Legal Risk Committee where applicable. If transactions are identified as having unacceptable environmental or environmentally related social risks, we engage with the client to ensure that we have appropriate risk mitigation measures in place. Details related to our restricted and prohibited transactions are available on our website.[20]

Carbon Risk Scoring Methodology

Our Carbon Risk Scoring Methodology is about understanding our clients' carbon journey over the short, medium and long term, and to inform our credit assessment with respect to our clients' climate risk and their strategy to manage this risk. Our Carbon Risk Scoring Methodology is also used to inform our heatmap process and scenario analysis. Beginning in 2021, as part of an annual review process, we scored our corporate and commercial clients using a range of scores from advanced to poor across a series of questions. Scores are reviewed by our credit risk management team as part of the credit adjudication process. We plan to use these results to support broader climate credit risk appetite and strategic discussions within the bank.

The objective of our Carbon Risk Scoring Methodology is to identify and understand the carbon transition risk for our corporate and commercial clients, including:

- A deeper understanding of our clients' plans to move to a low-carbon economy over the short to long term
- The physical risks caused by a warming planet and increases in extreme weather
- How the client compares to peers in the transition to a low-carbon economy

An overall climate risk score of between 1-10 (1 being low risk) is assigned taking into account assessments of a client's current, medium-term (3 to 5 years) and longer-term (5 years+) positioning with regards to physical and transition risks. Through the use of an internally developed template, the methodology takes into account commitments clients have made to the market. The scoring is used to aid relationship manager/client dialogue and potentially identify transition finance opportunities such as green or sustainability-linked loans.

Responsible Investing Policy

At CIBC Asset Management, we recognize that it's our responsibility to act in the best interests of our clients when we manage their capital. We believe environmental, social and governance (ESG) factors create risks and opportunities for investors, and it's essential for our clients to consider these factors when making investment decisions. To assess the long-term viability and success of a company's business model, it's important to evaluate its impact on the communities and economies where it operates. It's our belief that ESG factors play a crucial role in the long-term health and stability of a company. We integrate these ESG considerations into our research when assessing the value and performance of an investment over the medium and longer term. In the course of our analysis, this influences asset allocation, securities selection, portfolio construction, shareholder engagement and voting.

Our Responsible Investing Policy formalizes our commitment to incorporate responsible investing (RI) factors in our investment decisions and sub-advisor selection.

CIBC AM is a signatory of the United Nations-supported Principles for Responsible Investment (PRI)[21]. As a signatory, we reinforce and further our dedication to responsible investing by applying the PRI's ESG principles across all our investment classes. We also publish a UN PRI Transparency Report on our responsible investment activities annually. We are also a member of the Canadian Coalition for Good Governance[22], the Responsible Investment Association of Canada[23], the Canadian Bond Investors' Association[24], and the United Nations Environmental Programme – Finance Initiative[25].

Environmentally Responsible Procurement Standard

Our suppliers provide critical goods and services to our business operations. These supplier relationships are important to operating responsibly and meeting our sustainability goals. As part of our overall supplier management process, we monitor the environmental performance of suppliers and require them to complete a questionnaire at least every two years. Through this questionnaire, we collect and review information about their environmental management systems, environmental compliance and performance, particularly in the areas of greenhouse gas emissions, energy and material efficiency, and air and water quality as well as product stewardship, forestry practices and third-party certifications.

Our focus on green information technology (IT) continues to enhance our IT infrastructure to provide environmental benefits across CIBC. We manage our computers, monitors and printers to use less energy and to produce less waste.

Metrics and Targets

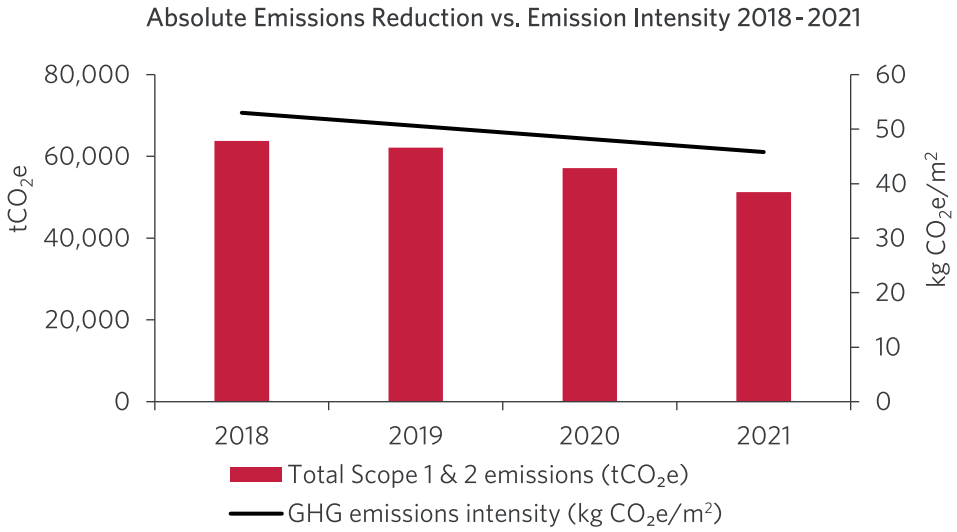
In the global economy, climate impact has become an important yardstick for measuring business performance. We use various metrics to drive and gauge our progress, with an ambition to achieve net-zero greenhouse gas emissions associated with our operational and financing activities by 2050.

Our climate journey begins with ensuring that our operations are managed responsibly to mitigate and reduce impacts to the environment. In simple terms, we have to make sure that our leased and owned offices and banking centres, as well as the resources that we use, are in line with the low-carbon economy of the future. With this in mind, we measure, track and report our operational GHG emissions with the intent of demonstrating our commitment to reduce our own operational GHG emissions and to encourage our clients and communities where we operate to do the same.

GHG emission reporting – operational Scope 1 and 2 emissions

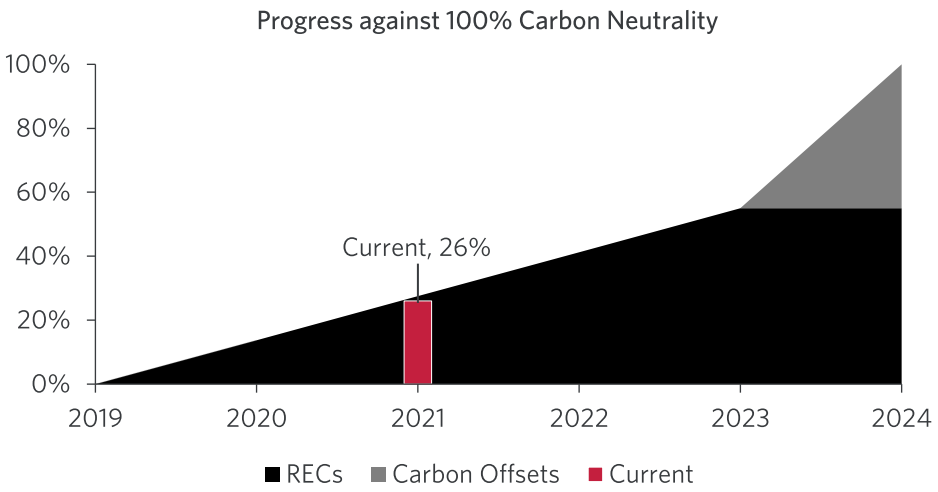
Our strategy of optimizing our operational efficiency is directly linked to climate change since transition risks such as increased energy costs are likely as carbon tax schemes are implemented. By focusing on reducing our energy consumption and resulting GHG emissions through the implementation of green building design criteria and energy efficient technologies, we will ensure that we minimize our vulnerability to potential rising energy costs. Thus, the most substantial business decision made to improve integration of climate-related issues into our operations was the development of our GHG emissions reduction target. Back in 2019, we established an intensity-based GHG target that has been enhanced into a 10-year commitment to reduce our absolute GHG Scope 1 and Scope 2 emissions from our operations (2018 baseline) by 30%. In 2021, we achieved a 20% decrease in our absolute GHG emissions since 2018, helping us achieve 66% of our 10-year commitment in just three years. We obtained limited assurance[26] of our 2021 Scope 1, Scope 2 and Scope 3 (upstream inputs related to internal paper use, business travel and subleases) GHG emissions for our Canadian and US operations, which represent 99% of CIBC's global footprint.

Figure 1: CIBC operational absolute and intensity GHG emissions over time



We also publicly disclosed our five-year commitment to achieve carbon neutrality in our operations and source 100% of our electricity from renewable sources by 2024. In 2021, we purchased 13,382 and 11,717 renewable energy certificates (RECs) from Canada and the US, respectively. By focusing our purchases on Canada's highest carbon intensity electrical grids, such as New Brunswick, Nova Scotia and Saskatchewan, as well as our entire US portfolio, we offset approximately 48% of our total indirect GHG emissions from electricity use in Canada and the US, contributing to 26% of our carbon neutral target. This puts us on track to achieve our target in 2024.

Figure 2: Progress against our commitment to achieve carbon neutrality in our operations



Expanding our GHG emission reporting – operational and financed Scope 3 emissions

To CIBC, measuring the impact of the resources that we use is also important. Hence, we have reported our **Scope 3 emissions – upstream inputs related to internal paper use, business travel and subleases** for more than four years. These Scope 3 emissions have decreased by 66% since 2018 mainly due to a combination of operational efforts. For example, we offer different paperless banking methods to our clients such as pre-authorized bill payment, online transfers, direct deposit programs, eDeposits, and telephone and online banking. These methods have resulted in 11.6 million paperless client accounts in 2021[27].

Furthermore, in 2021, we started measuring the **Scope 3 – downstream GHG emissions associated with our lending portfolio**, because creating transparency regarding the climate impact of our loans is important to CIBC and our stakeholders. As part of this, we joined the PCAF[28] and have adopted its methodology for measuring and disclosing the Scope 3 GHG emissions associated with our lending and investing as a way to understand the climate-related impacts of our portfolio.

The table below summarizes our 2020 Scope 3 absolute financed emissions. These results and any related targets are discussed further in subsequent sections.

2020 Scope 3 absolute financed emissions

Sector	Outstanding amount (CAD Millions)	Total emissions kilotonnes CO_2e ($ktCO_2e$)	PCAF data quality (1-5)*
Oil & Gas	$5,460**	1,900	2.6
Residential Mortgages	$201,245***	1,636	4.0

* Score 1 represents the highest quality data whereas Score 5 represents the lowest quality data.
** Includes upstream and downstream clients only. Excludes midstream, pipelines and oil and gas-related services. Data is as at October 31, 2020.
*** Represents all CIBC-brand mortgages, excluding mortgages outside of Canada, Simplii mortgages and subsidiary mortgages as at October 31, 2020.

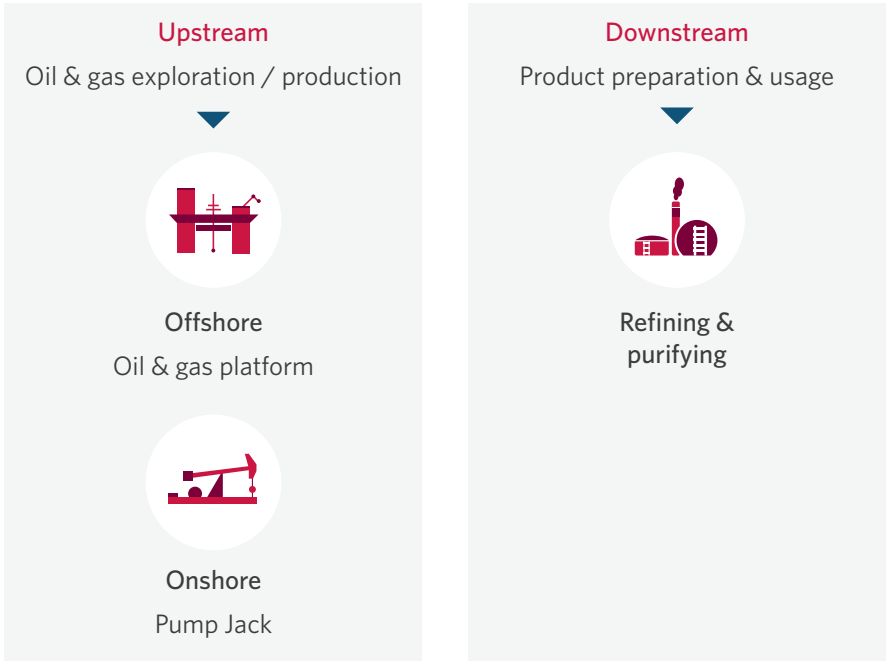
Oil and gas sector

Our initial work focused on assessing the financed emissions related to the oil and gas sector. We prioritized the oil and gas sector because it contributes up to 26%[29] of the total national greenhouse gas emissions in Canada. In addition, our heatmap analysis showed that this sector has a high vulnerability to both physical and transition risks.

Our oil and gas analysis focused on upstream and downstream related activities in our clients' operations.

We focused our efforts on obtaining high-quality data that was reported publicly by our clients as well as procuring environmental data through a third-party data provider. To start our financed emission calculation, we selected our fiscal year as at October 31, 2020, to ensure availability of our clients' GHG Scope 1 and 2 emissions data. When data was limited or not available, we used a proxy approach which is based on economical emissions factors as presented in PCAF's emission factor database. In order to reflect data quality used for the assessment, PCAF developed a scoring methodology (Score 1-5: Refer to PCAF data quality scoring framework) to provide further transparency related to our calculations. Overall, our data score is 2.6 based on PCAF's scoring methodology, which means that the majority of our data is considered primary/high-quality data.

Upstream and downstream oil and gas



PCAF data quality scoring framework

Score is given on a scale from 1 (more certain) to 5 (less certain)

PCAF data quality	Description
Score 1	Audited GHG emissions data or primary energy data
Score 2	Non-audited GHG emissions data or other primary data
Score 3	Averaged data that is peer/(sub-)sector specific
Score 4	Proxy data on the basis of region or country
Score 5	Estimated data with very limited support

Once our data collection and quality controls were satisfied, the financed emissions from oil and gas were calculated by multiplying the attribution factor by the emissions of the borrower or investee company and then summing these emissions up as described by PCAF's methodology.

$$Financed\ emissions = \sum_{c} Attribution\ factor_c \times Company\ emissions_c$$

$$(with\ c = borrower\ or\ investee\ company)$$

The attribution factor represents the proportional share of a given company – that is, the ratio of the outstanding amount to total equity and debt for private companies and Enterprise Value Including Cash (EVIC) for listed companies.

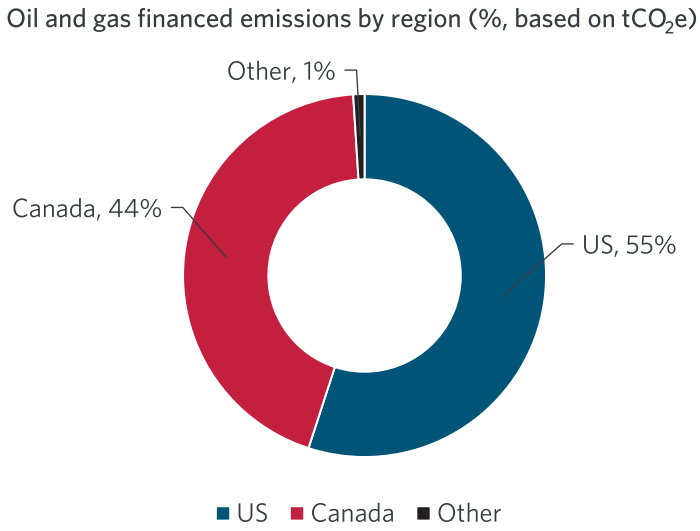
Our results

The total absolute Scope 1 and 2 financed emissions for our oil and gas portfolio is approximately 1,900 $ktCO_2e$. Calculating and reporting on our financed emissions provides transparency related to the climate-related impacts of our lending. This will help to inform our business on the transition to net-zero and measure the progress of our efforts to combat climate change.

Reporting financed absolute emissions of our oil and gas portfolio provides a comprehensive picture of our climate efforts by giving a snapshot of the impact of our portfolio. However, we believe that one of the best ways for banks to have a positive impact on climate change is by setting ambitious goals that encourage carbon intensive sectors to reduce their impact.

With this in mind, we developed the following baselines and interim targets for our oil and gas portfolio which align with the 2050 net-zero emissions pathway of the International Energy Agency (IEA), calculated to limit global warming to within 1.5°C with a 50% probability. Establishing targets is also reflected in our commitments with the Net-Zero Banking Alliance (NZBA)[30] and the TCFD reporting guidelines to disclose GHG emission and align with the expectations of stakeholders.

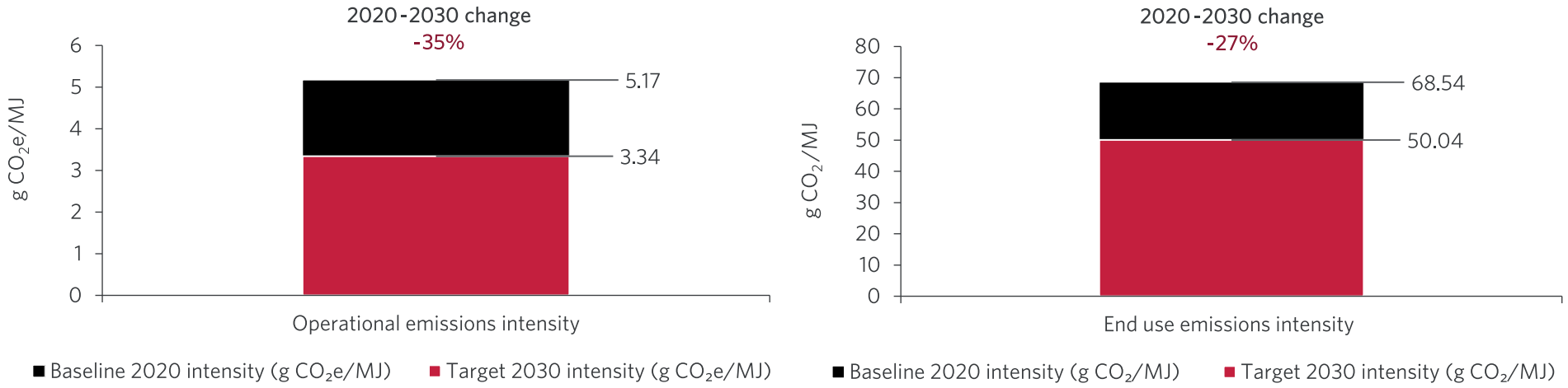
Figure 3: Financed emissions from oil and gas measured using PCAF



The operations-focused intensity indicator considers the Scope 1 and 2 emissions from the activities related to the upstream production and downstream refining of oil and gas products. The end use intensity indicator considers the emissions associated with the use of oil and gas products (Scope 3, category 11) and includes combustion of hydrocarbon-derived fuels sold into the market.

We included direct financing (our lending commitments, such as revolving credit facilities) and facilitated financing (our economic share of underwritten and arranged financings in the debt and equity capital markets) to provide a more comprehensive view of our activities. For our oil and gas 2030 net-zero interim targets we chose to use lending commitments (versus outstanding) to eliminate potential year-over-year volatility related to drawn loan amounts and reflect credit commitments we provide to the industry. We also use direct financing and facilitated financing to provide a more complete view on our overall portfolio emissions.

Figure 4: Our oil and gas 2030 net-zero interim targets (operational and end use emissions intensity)



To learn more about the methodology behind the development of our baseline emissions and reduction targets and future roadmap for target achievement, visit Our Net-Zero Approach.

Residential mortgages

Residential mortgages in Canada represented more than 50% of CIBC North American lending activities in 2020[31]. Therefore, it was meaningful to include residential mortgages in our initial disclosure of estimated financed emissions given the share of CIBC financing it represents. To align with other sectors being reported as part of our initial financed emission disclosure, the mortgage portfolio was evaluated based on all active accounts in Canada as at October 31, 2020.

While it represents our most significant lending activity, residential mortgages are one of the most difficult sectors to obtain high-quality client data due to the scarcity of building-specific energy labels and energy consumption data, the volume of mortgage clients, and inconsistent availability of client data across regions. Therefore, CIBC has made an effort to use the best available and/or most appropriate data sources – including energy and emission factors – to determine our financed emissions amongst mortgage clients while also maximizing our data quality score as per the PCAF methodology. To employ high-quality data and more accurate approaches, changes will be required on a regional and national level to affect the availability of actual building energy consumption data.

The financed emissions calculated for this sector were based on CIBC-brand Canadian mortgages, which represent approximately 95% of our residential mortgage portfolio. Other regions where CIBC residential mortgage clients exist were deemed immaterial and due to limited data availability were not included in these financed emission estimates.

As per the PCAF standard, certain products were excluded where applicable, namely any identified home equity lines of credit. Loans related to construction or renovation activities in residential buildings were not included, due to the difficulty in obtaining and measuring emissions associated with these individual projects and activities.

Calculation methodology and scoring

Once our data collection and quality controls were satisfied, the following PCAF-prescribed calculation was used to determine financed emissions attributed to CIBC lending in this sector:

$$Financed\ emissions = \sum_{b} Attribution\ factor_b \times Building\ emissions_b$$

$$(with\ b = building)$$

The attribution factor represents the proportional share of the total value of real estate within CIBC's mortgage portfolio – that is, the ratio of the outstanding amount to the total value of real estate at the time of mortgage origination. The attribution factor is then applied against building emissions to derive CIBC's overall financed emissions as described by PCAF's methodology.

Due to the size of our mortgage portfolio and a scarcity of metered building energy consumption data, a nuanced approach was taken to utilize best available energy and emission factors for determining building emissions. Where property size information was available CIBC leveraged energy factors provided by Natural Resources Canada to approximate building energy consumption, per energy source and per province. Emission factors derived from Canada's National Inventory Report were then applied against estimated energy consumption to determine overall emissions for a particular region.

Where specific client information was limited or not available such as building floor area, we used averages in order to apply the method described above.

Score is given on a scale from 1 (high accuracy and certainty) to 5 (low accuracy and certainty)

PCAF data quality	Description
Score 1	Financed emissions determined using **actual building energy consumption** (i.e., metered data) and supplier-specific emission factors per energy source. Highest quality data score attainable.
Score 2	Financed emissions determined using **actual building energy consumption** (i.e., metered data) and **average emission factors per energy source**.
Score 3	Financed emissions determined using estimated building energy consumption based on **official building energy labels, building size** and **average emission factors per energy source.**
Score 4	Financed emissions determined using estimated building energy consumption based on **building type and location-specific statistical data, building size** and **average emission factors per energy source**.
Score 5	Financed emissions determined using estimated building energy consumption based on **building type and location-specific statistical data, number of buildings** and **average emission factors per energy source**. Lowest quality data score attainable.

Our results

The total calculated 2020 Scope 1 and 2 absolute emissions for our residential mortgage portfolio are approximately 1,636 $ktCO_2e$[32]. Overall, our data score for the mortgage sector is 4.0 based on PCAF's scoring methodology, in large part owed to the availability of building floor area across the portfolio[33]. This equates to a physical emissions intensity of 14.19 $kgCO_2e/m^2$ and an economic intensity of 8.13 tCO_2e/$ million in loan outstanding.

In the interest of comparison and transparency, a secondary financed emission total was calculated to determine an estimate of the absolute emissions associated with CIBC's total committed amount in the mortgage sector. By comparison, this larger estimate for fiscal year 2020 was 1,863 $ktCO_2e$.

Exposure to carbon-related assets

In an effort to understand and monitor our concentrations of credit exposure to carbon-related assets, CIBC is following the TCFD recommendation of calculating the amount or percentage of carbon-related assets relative to the gross total value of our credit portfolio. For this calculation, we adhered to the carbon-assets definition described in TCFD's 2017 Annex. We included assets tied to oil and gas, mining and utilities sectors under the Global Industry Classification Standard, mapping them accordingly with our internal classification system. As per the guidance, we did not include water utilities, renewable electricity producers, nuclear energy producers, independent power producers, energy traders, electricity transmission or distribution companies, or waste management systems. As a result, our exposure to carbon-related assets totaled $23,710 million[34] out of a total credit risk exposure of $735,740 million[35] in fiscal year 2020, representing 3.2% of our total gross credit portfolio[36].

We acknowledge TCFD's revised definition of carbon-related assets in their updated 2021 guidance, "Implementing the recommendations of the TCFD". CIBC will be working towards refining and developing our carbon-related assets metric to meet these new requirements in future editions of our TCFD reporting.

Building on our current momentum

We know that climate action is not static, and that this journey will require us to be nimble and responsive to evolving global developments. We are committed to the work ahead, and will continue to do our part, both in our own operations and financing activities, and by supporting our clients through the transition to a low-carbon economy.

The path forward will require reflection, and iteration, and will be supported through our participation in industry and regulatory forums that are addressing evolving data, modelling, standards, and requirements. Through these learnings, we will continue to build out, validate and explore alternative methods to measure climate risk impacts and integrate this into our management reporting, decision-making, and Internal Capital Adequacy Assessment Process (ICAAP).

Simultaneously, we will continue to improve our reporting in alignment with TCFD's recommendations. Through our climate journey, as material changes are made to our data or methodology, these will be communicated and explained, as we strive to achieve accuracy and full transparency in our climate-related reporting.

A note about forward-looking statements

From time to time, Canadian Imperial Bank of Commerce and its subsidiaries (CIBC, we, us or our) make written or oral forward-looking statements within the meaning of certain securities laws, including in this document, in other filings with Canadian securities regulators or the U.S. Securities and Exchange Commission (SEC), and in other communications. All such statements are made pursuant to the "safe harbour" provisions of, and are intended to be forward-looking statements under applicable Canadian and US securities legislation, including the US Private Securities Litigation Reform Act of 1995. These statements include, but are not limited to, statements related to our priorities, targets, commitments (including with respect to net-zero financed emissions targets and reducing operational greenhouse gas (GHG) emissions) and goals, as well as our economic and environmental, social and governance (ESG) related impacts and objectives. We have included forward-looking information in this document to assist our stakeholders in understanding our priorities, targets, commitments and goals, as well as our economic and ESG-related impacts and objectives. Forward-looking statements are typically identified by the words "believe", "expect", "expectation", "aim", "anticipate", "intend", "estimate", "commit", "forecast", "goal", "target", "strive", "objective" and other similar expressions or future or conditional verbs such as "will", "may", "should", "would" and "could".

By their nature, these statements require us to make assumptions and are subject to inherent risks and uncertainties that may be general or specific, which give rise to the possibility that our predictions, forecasts, projections, expectations or conclusions will not prove to be accurate, that our assumptions may not be correct and that our priorities, targets, commitments and goals, and economic and ESG-related impacts and objectives will not be achieved. In addition, our climate risk analysis and net-zero strategy remain under development, and the data underlying our analysis and strategy remain subject to evolution over time. A variety of factors, many of which are beyond our control, could cause actual results to differ materially from the expectations expressed in any of our forward-looking statements and may require CIBC to adapt its initiatives and activities or adjust its targets as the quality and completeness of its data and methodologies continue to improve. These factors include but are not limited to: inflationary pressures, global supply-chain disruptions, the failure of third parties to comply with their obligations to us and our affiliates or associates, and strategic, reputation, conduct and legal, regulatory and environmental and social risk and other risks disclosed in the "Management of risk" section of our 2021 Annual Report, as updated by our quarterly reports. In addition, as we work to advance our ESG goals, external factors outside of CIBC's reasonable control may act as constraints on achieving these goals, including but not limited to varying decarbonization efforts across economies, the need for thoughtful climate policies globally, the availability of comprehensive and high-quality GHG emissions data (including from CIBC's clients), the evolution of our lending portfolios over time, reasonably supported methodologies, the need for active and continued participation of stakeholders (including enterprises, financial institutions and governmental and non-governmental organizations), deployment of new technologies and industry-specific solutions, the evolution of consumer behaviour, the challenges of balancing interim emissions goals with an orderly transition, and the development of regulations and frameworks internationally.

For CIBC to meet its ambition to achieve net-zero GHG emissions associated with its operational and financing activities by 2050, and for CIBC's clients to meet their GHG emissions reduction goals, CIBC and its clients may need to purchase voluntary and/or compliance carbon and renewable energy instruments ("Carbon Compliance Instruments"). The market for these instruments is still developing and their availability may be limited. Some Carbon Compliance Instruments are also subject to the risk of invalidation or reversal, and CIBC provides no assurance of the treatment of any such Carbon Compliance Instruments in the future. There may also likely be changes to applicable regulations and standards that impact the market for Carbon Compliance Instruments. The maturity, liquidity and economics of regulated and voluntary carbon markets may make it more difficult for CIBC and its clients to achieve their goals and may impact CIBC's ambition to achieve net-zero GHG emissions associated with its operational and financing activities by 2050.

This list is not exhaustive of the factors that may affect any of our forward-looking statements. These and other factors should be considered carefully and readers should not place undue reliance on our forward-looking statements. Any forward-looking statements contained in this document represent the views of management only as of the date hereof and are presented for the purpose of assisting our stakeholders in understanding our objectives and strategic priorities, and may not be appropriate for other purposes. While certain matters discussed in this document may be significant, any significance should not be read as necessarily rising to the level of materiality used for the purposes of complying with securities laws and regulations, even if we use the word "material". We do not undertake to update any forward-looking statement that is contained in this document or in other communications except as required by law.

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After the date of this document, CIBC does not assume any responsibility or obligation to update or revise any statements in this document, regardless of whether those statements are affected by the results of new information, future events or otherwise. No representation or warranty, express or implied, is or will be made in relation to the accuracy, reliability or completeness of the information contained herein. No liability whatsoever is or will be accepted by CIBC for any loss or damage howsoever arising out of or in connection with the use of, or reliance upon, the information contained in this document.

Climate metrics and data and other information contained in this document, including but not limited to those relating to scenario analysis, GHG emissions, financed emissions, carbon-related assets and emissions from our own operations are or may be based on significant assumptions, estimates and judgments. In addition, as discussed herein, some of the information provided, including regarding financed emissions, is based on estimated data with very limited support. Given their inherent uncertainty and complexity, and the significant issues with some of the underlying data, assumptions, estimates and judgments believed to be reasonable at the time of preparation of the document may subsequently turn out to be inaccurate. In addition, many of the assumptions, estimates, standards, methodologies, metrics and measurements used in preparing this document continue to evolve and may differ significantly from those used by other companies and those that may be used by us in the future. Legislative and regulatory changes, market developments and/or changes in data availability and reliability could materially affect the assumptions, estimates, standards, methodologies, metrics and measurements used by us and/or other companies, and could materially affect the comparability of the information and data across industries or companies and from one reporting period to a subsequent reporting period, as well as our ability to achieve our priorities, targets, commitments and goals. Any priorities, targets, commitments and goals discussed in this document, including but not limited to our net-zero emissions commitments, targets and goals, are aspirational and there can be no assurance that any such commitments, targets and goals will be achieved. See “A Note about Forward-looking Statements” above.

This document and the information contained within it is unaudited. Certain metrics and data contained in this document have been subject to limited assurance.

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All data and examples in this document reflect activities undertaken during the 2020 and 2021 fiscal years (November 1 – October 31), unless otherwise noted.

All amounts in this document are in Canadian dollars unless otherwise noted.

Endnotes

[1] https://www.unepfi.org/net-zero-banking/

[2] 2021 TCFD Guidance: https://assets.bbhub.io/company/sites/60/2021/07/2021-TCFD-Implementing_Guidance.pdf

[3] The 2021 TCFD "Annex" updates and supersedes the 2017 version of *Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures*. It provides both general and sector-specific guidance on implementing the Task Force's disclosure recommendations. Updates reflect the evolution of disclosure practices, approaches, and user needs.

[4] CIBC 2021 Sustainability Report: https://www.cibc.com/content/dam/about_cibc/corporate_responsibility/pdfs/cibc-esg-2021-en.pdf

[5] CIBC 2022 Net-Zero Approach: https://www.cibc.com/content/dam/about_cibc/corporate_responsibility/pdfs/cibc-net-zero-approach-en.pdf

[6] CIBC 2021 CDP Report: https://www.cibc.com/content/dam/cibc-public-assets/about-cibc/corporate-responsibility/environment/documents/cibc-cdp-climate-change-response-2021-en.pdf

[7] All executives globally and most employees except employees in Capital Markets, CBWM roles on business-specific incentive plans in Canada and US, and FCIB.

[8] As defined by TCFD, climate-related risks are "the potential negative impacts of climate change on an organization. Physical risks emanating from climate change can be event-driven (acute) such as increased severity of extreme weather events (e.g., cyclones, droughts, floods, and fires). They can also relate to longer-term shifts (chronic) in precipitation and temperature and increased variability in weather patterns (e.g., sea level rise). Climate-related risks can also be associated with the transition to a lower-carbon global economy, the most common of which relate to policy and legal actions, technology changes, market responses, and reputational considerations."

[9] https://media.garp.org/newmedia/gri/climate-risk-management-guide/Challenges_052919_PDF.pdf

[10] https://www.bankofcanada.ca/wp-content/uploads/2021/11/BoC-OSFI-Using-Scenario-Analysis-to-Assess-Climate-Transition-Risk.pdf

[11] *Beyond the Horizon: New Tools and Frameworks for transition risk assessments from UNEP FI's TCFD Banking Program* https://www.unepfi.org/publications/banking-publications/beyond-the-horizon/

[12] As defined by PCAF, Scope 1 emissions: direct emissions from owned or controlled sources.

[13] *Charting a New Climate: State-of-the-art tools and data for banks to assess credit risks and opportunities from physical climate change impacts* https://www.unepfi.org/publications/banking-publications/charting-a-new-climate/

[14] Probability of Default (PD): An estimate of the likelihood of default for any particular customer which occurs when that customer is not able to repay its obligations as they become contractually due. PD is based on through-the-cycle assumptions for regulatory capital purposes, and based on point-in-time assumptions reflecting forward-looking information for IFRS 9 ECL purposes.

[15] Expected loss: Expected loss represents the loss that is statistically expected to occur in the normal course of business, with adjustments for conservatism, in a given period of time.

[16] Risk-weighted assets (RWA): RWA consist of three components: (i) RWA for credit risk, which are calculated using the AIRB and standardized approaches, (ii) RWA for market risk, and (iii) RWA for operational risk. The AIRB RWA are calculated using PDs, LGDs, EADs, and in some cases maturity adjustments, while the standardized approach applies risk weighting factors specified in the OSFI guidelines to on- and off-balance sheet exposures. The RWA for market risk in the trading portfolio are based on the internal models approved by OSFI with the exception of the RWA for traded securitization assets where we are using the methodology defined by OSFI. The RWA for operational risk, which relate to the risk of losses resulting from people, inadequate or failed internal processes, and systems or from external events, are calculated under a standardized approach. Since the introduction of Basel II in 2008, OSFI has prescribed a capital floor requirement for institutions that use the AIRB approach for credit risk. The capital floor is determined by comparing a capital requirement calculated by reference to the Basel II standardized approach against the Basel III calculation, as specified by OSFI. Any shortfall in the Basel III capital requirement is added to RWA.

[17] Final Report of the BoC-OSFI Climate Scenario Analysis Pilotosfi/ bank of canada pilot: https://www.bankofcanada.ca/wp-content/uploads/2021/11/BoC-OSFI-Using-Scenario-Analysis-to-Assess-Climate-Transition-Risk.pdf

[18] As defined by PCAF, Scope 3 emissions: all other indirect GHG emissions (not included in Scope 2) that occur in the value chain of the reporting company. Scope 3 can be broken down into upstream emissions that occur in the supply chain (for example, from production or extraction of purchased materials) and downstream emissions that occur as a consequence of using the organization's products or services.

[19] https://www.cibc.com/content/dam/about_cibc/corporate_responsibility/pdfs/corporate-environment-policy-external-en.pdf

[20] Prohibited and restricted lending transactions. https://www.cibc.com/en/about-cibc/corporate-responsibility/environment/governance-reporting/governance.html

[21] United Nations-supported Principles for Responsible Investment (PRI): https://www.unpri.org/

[22] The Canadian Coalition for Good Governance (CCGG) is the pre-eminent corporate governance organization in Canada uniquely positioned to effect change as the voice of institutional shareholders that invest in Canadian public equities: https://ccgg.ca/

[23] The Responsible Investment Association of Canada promotes responsible investment in Canada's retail and institutional markets: https://www.riacanada.ca/

[24] The Canadian Bond Investors Association is the independent voice of Canadian bond investors, and hence of the millions of pensioners, policy holders and retail investors who depend on CBIA members and other similar industry participants for the sound management of these investments: https://bondinvestors.ca/

[25] The United Nations Environment Programme Finance Initiative (UNEP FI) is a partnership between UNEP and the global financial sector to mobilize private sector finance for sustainable development. https://www.unepfi.org/about/

[26] Verification statement: CIBC Fiscal 2021 GHG Inventory. To learn more visit: https://www.cibc.com/content/dam/about_cibc/corporate_responsibility/pdfs/verification-statement-2021-greenhouse-gas-inventory-en.pdf

[27] Operational environmental sustainability metrics included in our data table: https://www.cibc.com/content/dam/about_cibc/corporate_responsibility/pdfs/cibc_2021_esg_data_tables_v8-aoda-en.xlsx

[28] PCAF is an initiative led by the financial industry to develop a harmonized global standard to measure and disclose greenhouse gas emissions on loans and investments. To learn more visit: https://carbonaccountingfinancials.com/

[29] Source: https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/greenhouse-gas-emissions.html

[30] Net-Zero Banking Alliance. This UN-convened, industry-led initiative under the Glasgow Financial Alliance for Net Zero (GFANZ) is bringing together global banks that have set ambitions to align their lending portfolios with net-zero emissions by 2050: https://www.unepfi.org/net-zero-banking/

[31] At this time, our financed emissions calculations exclude other regions, including FCIB mortgages, due to limitations in data availability.

[32] Financed emissions for residential mortgages were calculated using best available data from both internal and external sources; however, due to the limitations on data availability and the estimates, we anticipate a large margin of error in the estimated emissions and intend to secure more reliable and accurate data for future disclosures. Publicly disclosed financed emission values may be restated as needed to reflect improvements in the quality of data used in our calculations.

[33] Where property data could not be obtained, national and regional averages were used to estimate property size, or alternatively for the US portfolio emissions were determined based on the number of households instead of building size.

[34] The total carbon-related assets include drawn, undrawn and other off-balance sheet figures.

[35] The total credit risk exposure includes drawn, undrawn and other off-balance sheet figures of our retail (i.e., real estate secured personal lending, qualifying revolving retail, other retail), business and government portfolios under the AIRB approach as at October 31, 2020. It excludes repo-style transactions and OTC derivatives.

[36] The total gross credit portfolio includes total retail portfolios (i.e., real estate secured personal lending, qualifying revolving retail, other retail) and business and government exposure by industry groups.