Methodologies for emissions calculations.

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Methodologies for emissions calculations.

Vancity

Contents

Operational emissions: scopes 1 and 2.

General process and review.

Data supporting our resource consumption for premises energy, water, waste, paper, and business travel are collected by the Climate Strategy and Performance team on a quarterly basis, at a minimum. This feeds into our annual reporting, where we have established a peer-review process wherein scopes 1 and 2 emissions and operational scope 3 emissions calculations are reviewed by a third-party consultant. We use the GHG Protocol as the basis for calculating our operational emissions.

Our current base year for reporting progress on emissions reductions is 2023. Roles and responsibilities related to calculating and reporting operational emissions can be found throughout this document, and for overall information on climate-related governance at Vancity, see the Accountability Statements.

While our operations are more under our control compared to financed emissions, there remain factors that affect our emissions that are outside of our control such as:

- Changing emission factors and global warming potential: We depend on the best available data from climate science on the impacts that GHGs have on our climate, and the emissions intensity of activities. We have observed changes in these factors that have had some impact on emissions, despite reductions in our energy consumption.
- Emissions intensity of our electricity grid: As we move our energy consumption from fossil-based to electricity, we will be more dependent on actions taken by BC Hydro to increase their renewable energy generation, which is expected to be sourced 100 per cent from renewable sources by 2030.

Baseline recalculation policy for operational emissions.

Our calculation methodology for scopes 1, 2, and 3 operational emissions is based on guidance provided by the GHG Protocol. While the protocol is relatively established, the following activities may trigger a recalculation of the baseline:

- Changes to the emission factor published annually by NIR
- Changes to global warming potential values published by the Intergovernmental Panel on Climate Change in the Assessment Reports
- Changes and improvements to the calculation methodology as best practice evolves
- Errors identified

Methodologies for emissions calculations.

We will recalculate and restate the baseline whenever the difference from the old baseline (by scope) exceeds a five per cent threshold. We recognize that there are instances where baseline recalculation may not be possible. In addition, we will omit reporting historical data that isn't comparable to base or current year data.

Organizational boundary.

Vancouver City Savings Credit Union has several subsidiaries. It's collectively referred to as Vancity (for more information on Vancity's active subsidiaries, see our Annual Report). Per guidance from the GHG Protocol, Vancity has selected the Control approach, specifically the Operational Control approach, to define our organizational and operational boundaries. We include scope 1 (gas use in facilities and fleet, refrigerant use), scope 2 (purchased electricity), and scope 3 (paper use, business travel, and employee commuting), associated with the organizations over which we exercise direct operational control in our emissions inventory. We consider financed emissions outside the boundary of Vancity's operational emissions and account for these under scope 3, category 15 in accordance with the operational control approach.

Facility overview.

Vancity owns facilities and leases space to operate our branch network. For more information on the facilities in our portfolio, please see the current Accountability Statements.

Most of our facilities have metering for their energy consumption. Wherever there is no metering, energy use is estimated by analyzing the energy use intensities (EUI) of the metered sites, arranged by building type, and applying the EUI to the area of the unmetered site. The facilities are primarily categorized by fuel type (electricity, fossil gas, DES, dual-sourced, hybrid), then the appropriate EUI is applied to the unmetered site. In exceptional cases where there might not be any utility meter readings due to a system upgrade or meter replacement, we use the average energy use of the same month from previous years as a proxy for the month or months that do not have any meter readings.

Emission factors.

We use emission factors from Canada's most recent National Inventory Report unless specific emission factors were available, as in the case of district energy systems. Where we use National Inventory Report factors, we use emission factors specific to each province for carbon dioxide emissions.

Methodologies for emissions calculations.

We use emission factors for residential, commercial, institutional, and agricultural for CH_4 and N_2O. Previously published emission factors may change with every update to the NIR. We will update the baseline calculations as per the guidance outlined in our baseline recalculation policy.

Scope 1 (gas).

Most of Vancity's facilities are in British Columbia and procure gas from FortisBC. Gas consumption is metered at most facilities and is estimated at non-metered facilities by using a model based on the energy use intensity of similar metered facilities.

Vancity reviews gas consumption monthly from our portfolio of facilities. The Specialist, Lease Administration from Vancity's Commercial Real Estate and Facilities Management (CREFM) extracts data, and is then reviewed by the Manager, Sustainable Operations from the Climate Strategy and Performance team. We analyze the data and identify and investigate significant variances to create a feedback loop in the measurement and monitoring process.

Vancity Community Investment Bank's Toronto Office

Building-level and estimated tenant use for gas and electricity (scope 2) is provided by the landlords in June, for the previous calendar year. This report provides a more accurate number than previous estimation methodology reliant on energy use intensity of Vancity's BC offices and is more specific to the energy consumption required in a different climate region. As of 2024, we use the previous year's energy use provided by our landlords to estimate the energy consumption at this location.

District energy systems (DES)

One of Vancity's facilities is connected to a district energy system, which uses a mix of energy sources but currently primarily operates on fossil fuels. Emission factors for this system are obtained from the managing organization.

Lonsdale Branch (BR 72)

Lonsdale Energy Corporation (LEC) requires that all buildings in its service area connect to their services. Our branch is included in the service area zone. There are three data inputs that need to be collected to complete the emissions calculations:

- Percentage of the building that is leased by Vancity
- Building thermal energy consumption for the billing period
- LEC emission factor

Note: Vancity's proportional usage from LEC must be calculated from the total building-level usage. The total area of the building is 50,903 ft^2, and our portion is 9.92 per cent of that area.

Calculation procedure

- The fossil gas emission factor is measured in metric tonnes/cubic metre (t/m^3)
- The fossil gas emission factors for carbon dioxide, methane, and nitrous oxide are taken from the latest version of the NIR (Tables A6.1-1 and A6.1-3). The fuel combustion for fossil gas and fossil gas liquids emission factor are used
- Global warming potential (GWP) factors per the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (AR5) are applied to methane and nitrous oxide to convert the emissions to CO_2 equivalent
- Where applicable, specific emission factors from district energy systems are obtained directly from the managing organization of the district energy system
- The appropriate emission factor is applied to metered and estimated gas consumption for each of the gas-consuming facilities

Vehicle fleet

Vancity operates a small fleet of vehicles. Actual fuel consumption isn't tracked at this time; however, both the type of vehicle and the distance travelled are tracked. Fuel consumed (calculated in litres of fuel) and resulting emissions are estimated using the odometer readings and the published fuel economy values from Natural Resources Canada. Vancity's fleet of service vehicles are managed by the CREFM and Information Technology teams.

Scope 1 (fugitive emissions from refrigerants).

Emissions from refrigeration and air conditioning can occur in the manufacturing process, leakage during operation, and disposal of the equipment. Our methodology is based on guidance from the US Environmental Protection Agency (US EPA) Accounting Tool to Support Federal Reporting of Hydrofluorocarbon Emissions: supporting documentation, applying the simplified screening approach 2, method b, and is limited to refrigerant leakage during operation and excludes disposal.

Each refrigerant used is a mixture of different chemical compounds with different GWPs. The GWPs for 2024 and 2023 are taken from the AR5. The facilities in Vancity's portfolio include office buildings, a data centre, and branches. Given the building types outlined above, we have classified all the buildings in Vancity's portfolio as offices.

Portfolio-specific inputs used to this calculation include the combined area of our facilities and the most-used refrigerants. We expect to make improvements to our data quality over time and we'll update the methodology accordingly. Starting with our 2025 calculations, we include updated refrigerant types for the HVAC units that were upgraded in 2025 with R-454B, where applicable.

Scope 2 (purchased electricity).

Vancity takes a location-based approach in calculating and reporting scope 2 emissions. All Vancity facilities in British Columbia are powered by BC Hydro for our electrical requirements[1]. Nearly all Vancity facilities have direct metering of our electricity consumption.

Vancity reviews the electricity consumption of its portfolio of facilities monthly. The Specialist, Lease Administration from Vancity's CREFM team extracts and records the, then reviewed by the Manager, Sustainable Operations from the Climate Strategy and Performance team. The team analyzes the data, identifies significant variances, and investigates them to create a feedback loop in the measurement and monitoring process.

Calculation procedure

- The electricity emission factor is measured in grams CO2e/kWh
- The province-specific generation intensity emission factor is taken from Table A13 of the latest version of the NIR
- We apply the appropriate emission factor to both metered (actual) and estimated electricity consumption for all facilities
- For facilities that are not metered, we estimate electricity consumption based on the energy use intensity of metered facilities for similar building types.

Two of the vehicles in Vancity's fleet are 100 per cent plug-in electric, and emissions from electricity use to charge vehicles while they are on-site are captured within scope 2 facility electricity usage. Vehicles are also charged at the residences of the employees who use them. Previously, electricity usage was measured using mobile meters. Starting in 2024, we estimated current-year electricity consumption from at-home EV charging, based on the metered usage from 2023, adjusted for the current year mileage compared to 2023 mileage.

C = (A*D)/B where: A = metered electricity consumption from 2023 calculations; B = total km driven (from 2023 odometer readings); C = estimated electricity consumption in calculation year; and D = total km driven (from calculation year odometer readings).

[1] For the Vancity Community Investment Bank's Toronto office information regarding electricity estimates, see above.

Operational emissions: scope 3 (categories 1, 6, and 7).

Our current base year for reporting progress on emissions reductions is 2023. For information on our baseline recalculation policy for operational emissions, see page 3. Roles and responsibilities related to calculating and reporting operational emissions can be found throughout this document, and for overall information on climate-related governance at Vancity, see the Accountability Statements.

Scope 3 (category 1 - purchased goods and services from paper).

The operational boundary for measuring emissions for purchased goods and services includes emissions from paper consumption only. Paper consumption data is collected from the following data providers on a quarterly basis:

Senior Purchasing Specialist	Organizational procurement	Strategic Procurement	Quarterly
Marketing and Communications Coordinator	Marketing materials	Marketing	Quarterly
Senior Manager, MECE Operations and Workforce Planning	Symcor	MECE	Quarterly
Governance officer	AGM and election materials	Governance	Q2 only

Data collectors request paper consumption data from each supplier and are expected to review the submissions before submitting the data to Accountability Reporting on a quarterly basis.

- Paper consumption data is consolidated into one spreadsheet, and pivot tables are used to aggregate and organize the data by paper grade and recycled content percentage
- Data inputs are entered into the Environmental Paper Network's online calculator. At the time of writing, the most current version of the calculator is 4.0

Emission factors

The Environmental Paper Network online calculator is used to calculate the emissions from paper consumption.

Calculation procedure:

- Paper use emission factors are measured in Metric Tonnes of CO_2e per Metric Tonnes (t/t) of paper consumed
- Paper use data is collected and reviewed every quarter
- Paper consumption data includes the weight of the paper consumed, percentage of recycled content and the paper grade, based on the Environmental Paper Network's categorizations: Uncoated Freesheet, Coated Freesheet, Uncoated Groundwood, Coated Groundwood, Supercalendered, Paperboard: Solid Bleached Sulfate, Paperboard: Coated Unbleached Kraft, Paperboard: Coated Recycled Board, Paperboard: Uncoated Bleached Kraft, Paperboard: Uncoated Unbleached Kraft, Paperboard: Uncoated Recycled Board, Linerboard, Corrugated Container, Tissue
- For alternative paper types such as sugar sheet paper, the calculation procedure noted above is completed, assuming zero per cent recycled content for uncoated freesheet, then discounted by 55 per cent to get the sugar sheet paper emissions, as per the life cycle assessment completed on sugar sheet paper

Scope 3 (category 6 - business travel).

There are three sources of activities for this emissions category:

- Air travel
- Business vehicle travel
- Expensed vehicle fuel consumption (mileage reimbursement)

Air travel

Flights purchased by employees for the purpose of business-related travel are paid for by the employees themselves and are then reimbursed by Vancity. The Finance team records the flight data (airport locations and cabin class) in a spreadsheet, which is then sent to Accountability Reporting and reviewed by Climate Strategy and Performance.

The flight distances are estimated based on the mapped distances provided by Google Maps between the departure and destination airports. These distances are used along with the corresponding emission factors and cabin classes to calculate the emissions.

Methodologies for emissions calculations.

Emission factors

The UK Department for Environment, Food and Rural Affairs (DEFRA) publishes the most widely used air travel emission factors. These emission factors are specified as a function of flight length and are based on UK flight patterns. Vancity has adopted these emission factors and reclassified the flight lengths to be compatible with the North American aviation environment.

Vancity has classified flights into short-haul and long-haul to correctly apply DEFRA's emission factors. Flights with distances of 3,700 km and greater are classified as long-haul, while flights with distances less than 3,700 km are classified as short-haul.

DEFRA publishes emission factors which incorporate the radiative forcing index. These incorporated emission factors are used in our calculations. Emission factors for local float plane and helicopter transportation factors are taken from the most recent version of the BC Best Practice Methodology for Quantifying GHG Emissions.

Calculation procedure:

- Air travel activity is measured in kilometres per person
- The Finance Officer reports all employee business air travel to the Documentation Collection Officer at the end of each quarter, including the departure, destination, and intermediate airport codes, cabin class, and the subsidiary the travel is associated with
- The flight cabin class determines the cabin class classification (e.g., economy or business/first class) and the appropriate emission factor to use (see emission factor procedures)
- Air travel emission factors are measured in metric tonnes CO2e per kilometre per person (tCO2e/km/person)
- Flight length classifications (e.g., short or long haul) are based on classifications provided by DEFRA to be consistent with the emission factors used. Flights are classified once per period at the beginning of the period
- Emission factors for each flight length classification are obtained from DEFRA once per period at the beginning of the period. DEFRA CH4 and N2O emission factors are converted from CO2e for reporting. Emission factors for local float plane and helijet transportation factors are taken from the most recent version of the BC Best Practice Methodology for Quantifying GHG Emissions
- Air travel emission factors are reviewed each reporting period at the beginning of the period to ensure the most appropriate factors are used.

Methodologies for emissions calculations.

Business vehicle travel

Modo is a car share co-operative where members can, on demand, lease vehicles that are parked all over Metro Vancouver. Our corporate Modo account enables employees to use the vehicles in Modo's fleet for business purposes. Modo has a variety of vehicles in its fleet, and these are recorded as part of the account's activity data. Each quarter, the data collector from the procurement team extracts the data provided in the Modo account, which includes the model, make, and year of each vehicle is also recorded for each booking, as well as the fuel efficiency, which is consistent with NRCAN's published values for each vehicle type.

Employees who use their personal vehicles for business-related travel submit their expenses through an internal Vancity portal. Kilometres driven and the purpose of the mileage are the data points collected. Our Finance team submits the vehicle mileages disbursed each quarter by extracting the data points through Power BI. These are then submitted to Accountability Reporting and reviewed by Climate Strategy and Performance.

Emission factors

Emission factors for vehicle use are taken from the most recent National Inventory Report: Greenhouse Gas Sources and Sinks in Canada (NIR, Table A6.1-14). There are different emission factors depending on the Tier of vehicle used. The NIR has factors for CO_2, CH_4, and N_2O. These are normalized as CO_2 equivalents using the global warming potential (GWP) published by the AR5, to align with the GWPs used by the NIR.

Average fuel efficiencies are taken from the most recent version of the BC Best Practices Methodology for Quantifying GHG Emissions.

Calculation procedure

- Vehicle fleet activity is measured in litres of fuel
- Each vehicle that was used by employees using the corporate Modo account is recorded for its make, model, year, fuel type, fuel economy, and distance driven
- Natural Resources Canada publishes a Fuel Consumption Guide on their website. For every vehicle in the fleet, the combined highway and city fuel economy in litres/100 km is obtained from this guide. For vehicles that are not provided a generic average fuel economy (those that are not gasoline and diesel), reasonable proxies are selected as follows:
- Hybrid – Toyota RAV4 Hybrid AWD (combined) from BC Best Practices
- BEV – Zero Tailpipe Emissions
- Plug-in Hybrid – Kia Niro Plug-in Hybrid from BC Best Practices

- Distance driven is extracted from the corporate Modo account on a quarterly basis.
- Annual distance travelled for each vehicle is calculated by aggregating the distances driven for each vehicle type during the year.
- For reimbursed mileage, the total mileage (in km) for the reporting period and the subsidiary the travel is billed to is obtained quarterly.
- The percentage of gasoline and diesel vehicles is obtained from the Statistics Canada National Travel Survey.
- Fuel consumption is calculated from each vehicle using the following equation:
- Fuel Consumption (L) = (Annual Distance Travelled (km)) x (Average Fuel Economy (L/100 km))/100
- Based on the fuel type, the appropriate emission factor (diesel or gasoline) is used to calculate total emissions. It is assumed that all hybrids use gasoline, and not diesel.

Scope 3 (category 7 - employee commuting).

Vancity uses the Commutifi survey platform and GHG calculator to quantify emissions from employees commuting to and from Vancity locations. Commutifi provides comprehensive analytics and reporting on an organization's scope 3, category 7 emissions. Through annual surveying in the platform, Commutifi:

- Collects the data necessary to get accurate commuting data
- Utilizes up-to-date emissions reporting factors for all transportation modes and connects into transportation feeds, like the General Transit Feed Specification (GTFS) to ensure accuracy of its calculations
- Provides aggregated emissions data for employees across all Vancity locations in Metro Vancouver, Vancouver Island, Cormorant Island, and Toronto. The Commutifi Commuter Survey 2024 supports all commute modes and is optimized for multi-modal commuting. The survey requires employees to enter their starting (e.g., home) and ending (e.g., work) addresses, nearest cross-streets, or postal codes. If an employee's home or work location changes mid-year, Commutifi will use the location of the employee at the time of the survey. This includes the case when a Vancity work location is closed, and employees are moved to a new location mid-year.

In the case that an employee commutes infrequently to an office location (e.g., fewer than once per week), the survey collects information related to the expected frequency of the infrequent commute.

Data from the 2024 Commuter Survey was used to inform the 2025 calculations. Updated 2025 employee data (number of employees, office/branch assignments) was used to inform 2025's calculations.

Methodologies for emissions calculations.

Data inputs and processes

The main inputs used in the generation of the estimates are:

- September Commutifi Commuter Survey 2024 – Distributed September 2024 with a response rate of 31 per cent
- September Commutifi Commuter Survey 2023 – Distributed September 2023 with a response rate of 47 per cent
- Minimum response rate: 20 per cent – Minimum response rate is based on the following industry-standard minimum survey response rates used by regulatory bodies, including DDOT in Washington, DC, USA for their Parking Cashout Law: 20 per cent response rate for 1000+ employees

Vehicle-based emissions process

The following process and calculations are used to measure commuter emissions for modes requiring the use of a vehicle: drive alone, carpool, vanpool, private shuttle, and rideshare.

Vehicle-based emissions are calculated based on the driving distance, vehicle miles per gallon (MPG), and number of passengers.

During the survey, employees are requested to provide their vehicle year, make, and model. If provided, the Commutifi platform uses the Combined MPG (i.e., the weighted average of city and highway MPG values that is calculated by weighting the city value by 55 per cent and the highway value by 45 per cent) of the actual vehicle to increase the precision of the calculation. Vehicle MPG data comes from a third-party database that sources data directly from vehicle manufacturers.

If the employee does not provide a specific vehicle, a vehicle type (e.g., electric, hybrid, SUV, car, motorcycle) is usually required. In that case, the system uses an average MPG for that type of vehicle.

For vanpool, shuttle, and rideshare where an employee may not know the vehicle type, an average value is used, matching the average vehicle used for each mode.

For modes with multiple passengers, the employee is required to provide the number of passengers (including the driver) normally in the vehicle.

Vehicle MPG data comes from a third-party service (Edmunds) that sources data directly from vehicle manufacturers via the US EPA. When EPA data is unavailable, additional vehicle manufacturer data is obtained from ADAC.

The calculation for vehicle-based emissions of a commute is:

Methodologies for emissions calculations.

$$\frac{\text{Distance (miles)}}{\text{Combined MPG}} \times \frac{8.78\ kgCO_2}{\text{gallons gasoline}} \div \#\ \text{of passengers} = kgCO_2\ \text{per person per trip}$$

Public transit emissions process

The Commutifi system measures the exact transit route an employee takes using data from the GTFS. This includes the public transit mode, operating transit agency, and exact distance.

Public transit emissions are calculated based on the distance taken in each public transit mode and the average passenger mile emissions (i.e., $kgCO_2$ per mile per passenger) for that mode.

Passenger mile emissions information was provided directly to Commutifi by TransLink as part of their partnership.

TransLink emission factors are from 2020. Updated data is released approximately every two years, and the calculations will be adjusted once new data is available. Bus emissions are notably lower than the industry average since half of its bus fleet uses lower-emission technologies.

Industry average emission factors are derived from 2019 industry averages across North America. The calculation for public transit emissions of a commute is:

Distance (miles) × passenger mile emissions = $kgCO_2$ per person per trip

Zero-emission modes

The following modes are considered to produce zero kg of CO_2 emissions. While the emissions for these modes are not technically zero, they are negligible, so the Commutifi system treats them as zero.

- Bike/e-bike
- Scooter/e-scooter
- Walk
- Remote

All vehicle fuel economy is mapped from local units to miles per gallon prior to Commutifi calculating total emissions.

Methodologies for emissions calculations.

The emission factor for gasoline is taken from EPA's 2023 Emission Factors for Greenhouse Gas Inventories, Table 2 – Mobile Combustion CO_2. CH_4 and N_2O emissions are calculated based on distance- based motor vehicle emission factors.

The General Transit Feed Specification is an open standard used to distribute relevant information about transit systems to riders. It allows public transit agencies to publish their transit data in a format that can be consumed by a wide variety of software applications.

Key assumptions

- Travel patterns: Commutes are modelled through the Commutifi system based on user survey data
- Commute distance: Employees are required to list their home address, nearest cross-streets, or postal code to ensure the Commutifi system provides the most accurate commute distance per use
- Employees are requested to provide their vehicle year, make, and model
- Remote work and office commute status: The Commutifi Commuter Survey 2024 captures current remote work and commute schedules

Financed emissions: scope 3 (category 15).

We apply the PCAF Global GHG Standard when measuring and disclosing emissions across all asset classes, which in turn aligns with the GHG Protocol. This reduces uncertainty by constraining the choices we make in our methodology. However, we still need to make certain methodological choices, interpretations, and assumptions, and we've documented these below.

Our base year for reporting progress on our financed emissions targets is 2023. Vancity's Climate Strategy and Performance (CSP) team, which sits within the organization's Strategy Division, has accountability for calculating and reporting financed emissions internally, and in our annual disclosures, with supporting teams noted in the table below. For overall information on climate-related governance at Vancity, see the Accountability Statements and Climate Action Plan.

Lead	Responsibility	Supporting teams
CSP manager, Sr. consultant, and Analyst.	Defining and maintaining calculation methodologies in line with PCAF; overall data collection, management and improvement plan; maintaining documentation; drafting climate-related disclosures.	Finance (analytics, annual reporting), Lines of business, Data Governance Office, Internal audit
CSP analyst.	Calculating financed emissions attributed to lending and financial investments including: query logic; integration of manually-collected data; integration of data from external vendors; data analysis.	Finance (analytics), Information technology, Credit Risk, Lines of business
Vancity Investment Management – Associate Portfolio Manager ESG.	Calculating financed emissions attributed to client assets under management including integration of data from external vendors and data analysis.	CSP

Due to the lack of access to actual or reported energy-consumption, heating fuel type, and emissions data, we rely heavily on regional averages including by industry sector (for business loans) and by building use or types (for residential and commercial building loans). Meaningful tracking of progress is further challenged by the fact that emission factors are updated over long periods of time and can change considerably over that span. There can be as much as a three-year time lag between the year we're reporting for, and the release of the emission factor or other externally-sourced data that we rely on.

We applied updated emission factors for all 2025 calculations, and we also applied them, where relevant, to historical and base year data. Consistent with our recalculation policy, we did not restate base year figures (2023) because the impact on financed emissions was immaterial.

Methodologies for emissions calculations.

Note that emissions scope coverage varies by asset class depending on PCAF guidance and/or data availability and reliability. See methodology notes by asset class below.

We have an internal data strategy with long-term goals that prioritize data improvements critical to tracking actual progress made on targets and meeting our net zero by 2040 commitment. We want to increase data reliability, quality and coverage as more technologies and capabilities advance, and as more data and methodologies become available.

We expect to recalculate and/or restate financed emissions data and associated targets in the future as our portfolios shift and as we implement improvements to data, methodologies, and processes. Our Financed emissions base year data and climate targets recalculation policy guides us when deciding whether to recalculate and restate data. We may update past figures when material changes occur—such as improvements in data quality, refinements to calculation methods, expanded portfolio coverage, or the correction of significant errors. Where it isn't possible to make historical data fairly comparable, we avoid restating figures that could be misleading and instead explain the reasons clearly through notes and disclosures. This approach helps ensure that changes over time are understood in context, and that reported trends reflect real progress rather than shifts in data or methodology.

Commercial and residential buildings mortgages.

We apply the methodological guidance from PCAF for the asset classes "Commercial real estate" and "Mortgages" to measure and disclose emissions associated with our commercial real estate and residential mortgage portfolios. In line with PCAF, we include on-balance sheet mortgages for the purchase and refinance of commercial and residential buildings, while excluding lines of credit. In addition to emissions associated with operational building energy use, we also account for emissions resulting from the use of refrigerants within these properties. We disclose estimated scopes 1 and 2 building-related financed emissions, as well as financed emissions per square metre.

Operational emissions.

Our approach to calculating financed emissions is to multiply an attribution factor to the emissions associated with the estimated energy use of the property financed.

Attribution factor

Attribution factor = Outstanding amount / Property value at origination

We account for a portion of the annual emissions of the buildings we finance by determining the ratio between our outstanding loan amount (numerator) and the property value at loan origination. This ratio is called the Attribution factor and reflects our contribution to the acquisition or refinancing of new or existing buildings by our members.

The Outstanding amount is the drawn amount of funds by the borrower as at December 31.

The Property value at origination is the appraised value of the property at the time of loan origination. We use the property value available closest to loan origination date using data obtained from our third-party data providers, and manually collected data where third-party data is not available.

Emissions

Financed emissions = Attribution factor x Building emissions (scopes 1+2)

Building emissions = Energy consumption x Emission factor

Approach for buildings where we have floor area data (PCAF data quality 4)

Methodologies for emissions calculations.

- We obtain emission factors expressed in tonnes CO_2e per square foot, scope 1 plus scope 2, according to building use or type, and location (province of British Columbia, Ontario, or Alberta).
- We multiply the appropriate emission factors by the relevant floor area of the buildings in Vancity's portfolio and added these to get total emissions.

Approach for buildings where we do not have floor area data (PCAF data quality 5)

We extrapolate floor area using the data for "PCAF data quality 4" buildings, where we do have floor area data. Our tested assumption is that this is more representative of our building portfolio, which tends to comprise buildings that are smaller on average, than using Natural Resources Canada's "per building" averages. PCAF are supportive of this approach. We appreciate that financed emissions estimations for the same buildings might change in the future as the mix of "data quality 4 buildings" (and based on this, calculated dollar value per square metre) changes.

- We divide the floor area of data quality 4 loans by the property value to obtain the average square metre per dollar value, by building use.
- For each category of building use, we multiply the property value of data quality 5 loans by the average square metre per dollar value to estimate the floor area.
- Once we have estimated floor area, we apply the same methodology as for data quality 4 loans above.

In 2025, the weighted PCAF data quality score for emissions attributed operational building energy use was 4.2 for commercial buildings and 4.1 for residential buildings. Scopes 1 and 2 emissions have identical data quality scores.

Note on data availability

While we collect building floor area data for most of our mortgages, this data is typically contained within PDFs and not easily accessed. In addition, the data for appraised property value in our systems is not collected in a consistent manner, and may be updated post loan origination date. For these reasons, we acquire property attribute data from third parties for BC-based commercial and residential properties associated with our portfolios. For loans outside of BC and large commercial building loans within BC where data gaps remain, we manually collect floor area and property value.

Methodologies for emissions calculations.

External data inputs

We use data sourced directly from Natural Resources Canada (NRCan) to derive emission factors per square foot and per building/unit. The data sources and emission factors are consistent with the PCAF database, however, we use the most recently available data. We calculate derived emission factors (tCO_2e/m^2 or tCO_2e/building or unit) as follows, by province and relevant building use/house type:

- We multiply provincial electricity use (in petajoules or PJs) by the conversion factor 277.778 to convert PJs to GwH.
- We multiply GwH by the most recent provincial grid consumption intensity emission factor and divided by a million to obtain electricity-related emissions ($MtCO_2e$).
- We add electricity-related emissions and GHG emissions excluding electricity to obtain total emissions (MtCO2e).
- We divide this by total floor space (millions of square metres) to obtain total emissions per square metre (tCO2/m2) – the derived emission factor.
- To obtain the per building or unit derived emission factor for residential buildings, we divide total emissions (MtCO2e) by total households.

Data input	Source	Reference year	Publication year
Electricity grid factors: Consumption intensity gCO_2e/kWh electricity generated	National Inventory Report 1990–2023 Part 3	2023	2025
Electricity use (petajoules) by building use or house type, by province GHG emissions excluding electricity (megatonnes of CO_2e) by building use or house type, by province Total floor space (millions of square metres) by building use or house type, by province	National Energy Use Database, Office of Energy Efficiency, Natural Resources Canada Commercial: Secondary Energy Use and GHG Emissions by Activity Type tables Residential: Secondary Energy Use and GHG Emissions by End-Use- House types detailed tables	2022	2025
Total households (000s) by house type, by province	National Energy Use Database, Office of Energy Efficiency, Natural Resources Canada Residential: total households by building type tables	2022	2025

Methodologies for emissions calculations.

Emissions related to refrigerant use.

Refrigerants are gases that aid in the transfer of heat from one place to another. For example, in a fridge they move unwanted heat from inside to outside. While leakage of refrigerants is regulated, persistent leaks of these gases are typically overlooked and not tracked. It is likely that their significance will increase over time as existing building stocks age, and as air or ground-source heating and cooling systems become more prevalent.

We calculate emissions attributed to operational refrigerant use in buildings (part of scope 1 emissions) using guidance from the GHG Protocol Corporate Standard, and the Environmental Protection Agency (EPA) guidance for HFC emissions accounting. Our overall approach is to calculate emissions based on the financed building area, which already considers the attribution factor. We then estimate emissions for each category of building use/housing type, using the following formulae:

Refrigerant-related emissions = Refrigerant emissions (tCO_2e) x Associated global warming potential (GWP)

Refrigerant emissions (tCO_2e) = Capacity of refrigeration units (kgs) x Annual loss of refrigerants (% of capacity)

We estimate Capacity (kgs) based on financed area (square feet) and refrigerant capacity per square foot proxies. The assumed refrigerant type is determined by EPA guidance, and leakages associated with newly installed or disposed of equipment are assumed to be immaterial.

External data inputs

Data input	Source	Reference year	Publication year
Annual loss of refrigerants (% of capacity/year)	Accounting Tool to Support Federal Reporting of Hydrofluorocarbon Emissions Annual loss: Operating emission factors, table 3-3 Refrigerant type: table 3-6 Refrigerant capacity: table 3-10	2014	2016
Default refrigerant type			
Proxy refrigerant capacity (kg/ft^2)			
Global Warming Potential (GWP) Values[1]	Greenhouse Gas Protocol AR5 values as compiled by GHG Protocol	n/a[2]	2016[2]

1 GWP = the global warming potential of the refrigerant relative to CO_2 and are specific to each refrigerant type
2 Defined over a 100-year time horizon
3 To ensure consistency across scopes and reporting periods, and to maintain alignment with NRCan's National Inventory Report (NIR), GWPs from the IPCC Fifth Assessment Report (AR5) are used rather than the more recent AR6 values.

Methodologies for emissions calculations.

Business loans.

We apply the methodological guidance from PCAF for the asset class "Business loans and unlisted equity" to measure and disclose emissions associated with our business loans. In line with PCAF, we include on-balance sheet loans and lines of credit to businesses, nonprofits, and any other structures of organizations that aren't traded on a market and are for general corporate purposes (i.e., with unknown use of proceeds as defined by the GHG Protocol). This includes revolving credit facilities, overdraft facilities, and business loans secured by real estate. We disclose estimated scopes 1, 2, and 3 borrower emissions.

Our approach to calculating financed emissions in line with PCAF is to multiply an attribution factor by the emissions of the borrower.

Attribution factor.

Attribution factor = Outstanding amount / Total equity plus debt

We account for a portion of the annual emissions of the businesses we finance by determining the ratio between the outstanding loan amount (numerator) and the economic value of the organization (denominator). This ratio is called the Attribution factor and reflects that our financing funds general operating activities undertaken by organizations in our communities.

The Outstanding amount is the drawn amount of funds by the organizations we lend to at the end of the year (December 31).

We obtain Total equity plus debt from year-end reported company financials. If this is not available we default to using the outstanding balance sheet value as a proxy for company value.

Emissions.

Financed emissions = Attribution factor x Company emissions (all scopes)

Few of the small and medium businesses we lend to track or report emissions. In the absence of reported data, we estimate emissions using economic activity-based emissions by sector. We calculate emissions of the borrower in one of two ways and we use the same approach for scopes 1, 2, and 3:

- For businesses where we know the annual revenue, we apply the appropriate emission factor for the sector (based on NAICS) per unit of revenue (e.g., tCO_2e per dollar revenue earned in a sector). This approach equates to a data quality of 4.

- Where we know the outstanding loan amount, but do not have access to annual financial data of the business, we apply the appropriate emission factor for the sector (based on NAICS) per unit of asset (e.g., tCO_2e per dollar of asset in a sector). This approach equates to a data quality of 5.

When discrepancies arise between the financial year under review and the date of the company's emissions or financial data, we utilize the most current information available, even if it pertains to different reporting periods.

In 2025, the weighted PCAF data quality score for emissions attributed to business loans was 4.7. The data quality score is identical for all emissions scopes.

External data inputs.

For business loans, the PCAF database provides economic activity-based emission factors derived from the EXIOBASE dataset. While the PCAF Database includes country-specific emission factors, PCAF's advice is to use the appropriate regional averages for emissions calculations. For Canada this is "Advanced economies". To apply the most accurate emission factor, we first map a loan's Canadian NAICS code to the American NAICS code and then we map this to Exiobase. We match at the four-digit level, and if a match at the four-digit level is not available, we default to applying emission factors at a broader level (the three-digit or two-digit NAICS code).

In addition, we convert EXIOBASE emission factors from euros to Canadian dollars using the Bank of Canada average annual rate and further adjust the emission factors to consider inflation since 2019 using the annual average change in the Consumer Price Index.

Data input	Source	Reference year(s)	Publication year
Emission intensity per million € of revenue by sector based on industry sector code (kgCO2e/$)	PCAF database: Economic Activity-based Emission Factors for Advanced economies derived from EXIOBASE v3.91	2019	2023 (v3.9)
Emission intensity per million € of assets by sector based on industry sector code (kgCO2e/$)		2019	2023 (v 3.9)
Consumer price index	Statistics Canada	2019-2025	2025

1 The EXIOBASE database is a global, detailed multi-regional table that estimates emissions by industry. The database has high sectoral coverage and a large set of environmental information (e.g., types of emissions, materials/resources).

Industry sectors.

The table below shows the North American Industry Classification System (NAICS) sector codes we use to disclose emissions and exposure by industry sectors, including designated and carbon-intensive sectors according to OSFI Guideline B-15 Risk Management and the UN environment program Guidance for Climate Target Setting for Banks – Version 4.

Sector description	NAICS Canada 2022 Version 1.0[1]
Electricity production and distribution (power generation)	221113, 221119 Electricity production from renewable sources & nuclear 221112 Fossil fuel electricity production 221111 Hydro electricity production 22112, 23713, 335 Electricity support & distribution
Fossil fuels (coal, oil, and gas)	2121, 213117, 213119 Coal industry & support 324, 326, 412, 457, 486 Fossil fuel refinery 21111, 213111, 213118, 2212, 23712, 21114 Natural gas/Oil/Sand oil industry, extraction & support
Energy intensive industries	325, 327, 331, 332 Manufacturing (includes Aluminum, Iron & steel, Cement) 2122, 2123 Mining 322, 2213, 23711, 562 Paper & pulp, Water & sewage system & waste management
Transportation	481, 4881, 482 Air transportation, Rail transportation 336, 483-485, 487, 4882-4885, 4889 Other transportation
Agriculture and forestry	111, 1151, 41112 Crop production & support 112, 1152, 41111 Livestock production & support 113, 1153, 321 Forestry & support
Real estate rental and leasing	53 Real estate rental & leasing
Finance and insurance	52 Finance & insurance
Construction	236-238 Construction of buildings, Heavy & civil engineering construction, Specialty trade contractors
Healthcare and social assistance	62 Health care & social assistance
Food and beverage	114, 311, 312, 4131, 4132, 445 Food & beverage industry & support
Other industries[2]	313-316, 333, 334, 337, 339
Other service sectors[2]	323, 41113, 41119, 4133, 4134, 414-419, 441, 444, 449, 455, 456, 458, 459, 49, 51, 54, 55, 561, 61, 71, 72, 81, 91
All other sectors	Anything not captured by the above

1 We assigned each loan to a single primary sector for our 2025 disclosures per our Climate Update to prevent double counting. This assignment does not mean the activity is exclusive to that sector for other climate risk assessments.
2 Other industries and Other service sectors according to OSFI Guideline B-15.

Methodologies for emissions calculations.

Motor vehicle loans.

We apply the methodological guidance from PCAF for the asset class “Motor vehicle loans” to measure and disclose emissions associated with our motor vehicle loans. In line with PCAF, we include on-balance sheet loans and lines of credit to businesses or individuals, used to finance one or several vehicles.

Our overall approach to calculating financed emissions is to multiply an attribution factor to scopes 1 and 2 emissions associated with the energy use of the motor vehicle, scope 1 being direct emissions from fuel combustion in vehicles and scope 2 being indirect emissions from electricity generation consumed in hybrids or fully electric vehicles.

Attribution factor.

Attribution factor = Outstanding amount / Motor vehicle value at origination

We account for the portion of the annual emissions of motor vehicles we finance by determining the ratio between our outstanding amount (numerator) and the value of the motor vehicle at the time of the transaction (denominator). This ratio is called the Attribution factor and reflects our contribution to the purchase of vehicles by our members.

The Outstanding amount is the drawn amount of funds by the individuals we lend to at the end of the year (December 31).

The Motor vehicle value at origination is the assessed value of the motor vehicle at the time of loan origination. If this information isn’t readily available in our systems, we assume 100 per cent attribution of the vehicle’s emissions.

Emissions.

Financed emissions = Attribution factor x Vehicle emissions (scopes 1+2)

Vehicle emissions = Σ Distance travelled x Efficiency x Emission factor

In the absence of reliable data (we don’t track the model or make or year of the motor vehicle we’re financing), we estimate emissions by multiplying the number of motor vehicles financed (using number of loans as a proxy) by emissions per average vehicle year in BC, which we calculate with sources from Clean BC and Natural Resources Canada.

In line with PCAF, we calculate emissions per vehicle-year by multiplying the distance travelled (km) in a year by the vehicle’s fuel efficiency (litres of gasoline/km) and the vehicle’s fuel type-specific emission factor (kgCO_2e/litre of gasoline).

Methodologies for emissions calculations.

For each fuel type listed below, we calculate a weighted-average emission factor, combining emission factors for light-duty vehicles and trucks based on their relative shares.

- Gasoline (general loans and credit lines).
- Hybrid (Planet-Wise™ transportation loans, used as a conservative estimate due to lack of specific tracking for electric vehicles).
- Electric (electric vehicle fleet financing).

In 2025, the weighted PCAF data quality score for emissions, both scopes 1 and 2, was 5 (highest uncertainty).

External data inputs.

Data input	Source	Reference year	Publication year
Average fuel efficiency (L/km) and Emissions factor (kg CO2e/km) for light-duty vehicles and light-duty trucks by vehicle fuel type.	Clean BC	2024	2025
Average distance travelled per year (km)	Natural Resource Canada	2023	2025

Methodologies for emissions calculations.

Project finance.

We apply the methodological guidance from PCAF for the asset class “Project finance” to measure and disclose emissions associated with our clean energy portfolio at Vancity Community Investment Bank. In line with PCAF, we include on-balance sheet loans. We exclude construction-related finance. In addition to measuring emissions generated, we measure and report avoided emissions for renewable energy project finance.

Our approach to calculating financed emissions is to multiply an attribution factor to scopes 1, 2 and 3 emissions associated with the project.

Attribution factor.

Attribution factor = Outstanding amount / Total equity plus debt

We account for the portion of the annual emissions attributed to the financed project by determining the ratio between the outstanding amount (numerator) and the total project value (denominator). This ratio is called the Attribution factor and reflects our contribution to the project being financed.

The Outstanding amount is the drawn amount of funds by the project, at the end of the year (December 31).

We obtain Total equity plus debt from year-end project financials. In cases where sufficient project-level information is unavailable, we apply the business loan approach and conservatively attribute 100% of associated emissions based on outstanding balances and sector-specific emission factors (e.g. NAICS-based proxies).

Financed emissions.

Financed emissions = Attribution factor x Project emissions (all scopes)

Few of the projects we finance track or report emissions. In the absence of reported data, we estimate emissions using economic activity-based emissions by sector. Typically, we calculate emissions (all scopes) related to the project by applying the appropriate emission factor for the sector (based on NAICS) per unit of revenue (e.g., tCO_2e per dollar revenue earned in a sector). This approach equates to a data quality of 4.

If reliable project financials are not available, we attribute 100% of emissions to the outstanding amount and use sector-specific emission factors per unit of asset (data quality 5).

When discrepancies arise between the financial year under review and the date of the project's financial data, we utilize the most current information available, even if it pertains to different reporting periods.

In 2025, the weighted PCAF data quality score for emissions attributed to project finance was 4.1. The data quality score was the identical for all emissions scopes.

Avoided emissions (renewable energy projects).

Financed avoided emissions = Project avoided emissions × Attribution factor

Avoided emissions estimate how much climate pollution is prevented when a renewable energy project generates electricity that would otherwise have come from the grid. To calculate avoided emissions we:

- Multiply the project's estimated annual electricity generation by the carbon intensity of the provincial electricity grid.
- Apply the attribution factor (per financed emissions, above).

This shows the emissions that are likely avoided by producing clean electricity instead of relying on more carbon-intensive power sources. For avoided-emissions calculations, we treat renewable electricity generation as having zero operational (scope 1 and 2) emissions, consistent with grid-displacement methodologies. We report actual project emissions separately to avoided.

External data inputs.

Data input	Source	Reference year	Publication year
Emission intensity per million € of revenue or assets by sector based on industry sector code (kgCO2e/$)	PCAF database: Economic Activity-based Emission Factors for Advanced economies derived from EXIOBASE v3.9	2019	2023 (v3.9)
Electricity grid factors: Consumption intensity gCO_2e/kWh electricity generated	National Inventory Report 1990-2023 Part 3	2023	2025

1 The EXIOBASE database is a global, detailed multi-regional table that estimates emissions by industry. The database has high sectoral coverage and a large set of environmental information (e.g., types of emissions, materials/resources). See page 23 (External data inputs - Business loans) for more information.

Sovereign debt (financial investments).

We apply the methodological guidance from PCAF for the asset class "Sovereign Debt" to measure and disclose emissions associated with relevant on balance sheet financial investments. In line with PCAF, we include on-balance sheet investments in bonds issued by the Government of Canada, as well as Agency bonds issued by the Canada Mortgage and Housing Corporation, a federal Crown corporation.

Our approach is to calculate financed emissions by multiplying an attribution factor by sovereign emissions—scope 1 emissions of Canada, defined as GHG emissions attributable to emissions generated within Canada's boundaries.

Attribution factor.

Attribution factor = Exposure to sovereign bond / PPP-adjusted GDP

We account for a share of Canada's annual emissions based on the ratio of our exposure to the country's total PPP-adjusted economic output. This ratio, known as the Attribution factor, represents our proportional contribution to the financing of national economic activity.

We use the market value of the investment as at the end of the fiscal year (December 31) to determine Exposure to sovereign bond.

Purchasing Power Parity (PPP)-adjusted Gross Domestic Product (GDP) is the value of a country's output as a proxy for the "value of the country", provided in International Dollars. We convert this value to $CAD using the Bank of Canada's annual exchange rate for $USD.

Emissions.

Financed emissions = Attribution factor × Sovereign emissions (scope 1)

Sovereign emissions are emissions of the country. We use official national greenhouse gas emissions data from Canada's National Inventory Report, including emissions and removals from LULUCF (land use, land use change and forestry). We disclose emissions excluding LULUCF as a supplementary metric. We're aware that disclosed financed emissions may change in future reporting cycles due to methodological updates to national greenhouse gas inventories, including potential future changes to global warming potentials adopted under the UNFCCC.

In 2025, the weighted PCAF data quality score for emissions attributed to sovereign debt was 2 (modelled using national inventory data).

Methodologies for emissions calculations.

External data inputs.

Data input	Source	Reference year	Publication year
Sovereign (production) emissions including and excluding LULUCF ($ktCO_2e$) for Canada	Annex 9 Canada's GHG emissions tables by IPCC sector 1990–2023 (EN Annex 9 GHG IPCC Canada)	2023	2025
PPP-adjusted GDP ($ millions International) for Canada	World Bank[1]	2024	2025

1 The PCAF database sources sovereign emissions from the United Nations Climate Change GHG Profile. We sourced the most recently available data (2023 instead of 2021) from Canada's National Inventory Report.
2 The link provided leads to the most recent version, and the data may be updated retroactively.

Corporate and private bonds (financial investments).

We apply the methodological guidance from PCAF for the asset class "Listed equity and corporate bonds" to measure and disclose emissions associated with on balance sheet investments in corporate bonds. In line with PCAF, we include on-balance sheet investments in bonds issued by listed or private companies.

Our approach is to calculate emissions by multiplying an attribution factor by investee scopes 1 and 2 emissions. We exclude scope 3 data because it remains inconsistent and is not yet reliable across issuers.

Attribution factor.

Attribution factor = Outstanding amount / Enterprise value including cash OR Total equity plus debt

We account for a share of company emissions using a ratio of the outstanding amount to the enterprise value. This ratio, known as the Attribution factor, represents our proportional contribution to the company's emissions, based on the share of its value we finance.

The Outstanding amount is the on-balance sheet market value of the investment at the end of the fiscal year (December 31).

We obtain Enterprise value including cash (EVIC) or Total equity plus total debt (for private companies) primarily from a third-party data provider, in this case Bloomberg.

Emissions.

Financed emissions = Attribution factor x Company emissions (scopes 1+2)

We source Company emissions from various sources including Bloomberg or, if unavailable through Bloomberg, from the company's published reports. In cases where emissions are not disclosed by the company, we estimate emissions using economic activity-based emissions by sector (please see the methodology for "Listed equity and business loans" earlier in this document).

When discrepancies arise between the financial year under review and the date of the investee's emissions or financial data, we utilize the most current information available, even if it pertains to different reporting periods.

Data quality typically ranges between 2 (company-reported emissions) and 4 (estimates using revenue-based emission factors). Note that as of Dec 31 2025, Vancity did not hold on balance sheet investments in corporate or private bonds.

Methodologies for emissions calculations.

Listed equity (off-balance sheet managed client investments).

We apply the methodological guidance from PCAF for the asset class "Listed equity and corporate bonds" to measure and disclose emissions associated with Vancity Investment Management's client assets under management (off balance sheet). We include equity investments including holdings in mutual funds, specifically public common and preferred stock. We don't yet estimate emissions for other types of client investments such as corporate bonds and sovereign bonds due to challenges accessing the required data. We plan to include these in the future, as data allows.

Our approach is to calculate emissions by multiplying an attribution factor by investee company scopes 1, 2 and 3 emissions. We include scope 3 emissions for AUM as, particularly for listed equity, scope 3 emissions are often material to enterprise value, more consistently disclosed, and central to engagement objectives.

Attribution factor.

MSCI accounts for a portion of the annual emissions associated with our investments by determining the ratio between the outstanding amount of our investment (numerator) and the value of the investee company (denominator).

Attribution factor = Outstanding amount / Enterprise value including cash (EVIC)

The Outstanding amount is the market value of the dollars invested as at the end of the fiscal year (December 31).

We obtain Enterprise value including cash (EVIC) from a third-party data provider, in this case MSCI.

Emissions.

Financed emissions = Attribution factor x Company emissions (scopes 1+2+3)

We source Investee emissions, all scopes, from a third-party data provider: MSCI ESG Research. MSCI collects data once per year from the most recent corporate sources. In cases where companies haven't disclosed any relevant data, MSCI uses a proprietary methodology to estimate emissions using previous company data or extrapolated values from peer groups.

When discrepancies arise between the financial year under review and the date of the investee's emissions or financial data, we utilize the most current information available, even if it pertains to different reporting periods.

Methodologies for emissions calculations.

Data quality ranges between 2 (company-reported emissions) and 5 (estimated emissions based on extrapolation from peer groups). In 2025, the weighted PCAF data quality score for emissions, scopes 1 and 2, was 2.3. For scope 3 emissions the data quality score was 2.4.