

**Independent Opinion
on the Statements of
Manufacturers Life Insurance
Company**

Relative to Its

**Manulife Investment Management Real
Estate (MIMRE) Greenhouse Gas Emissions
Inventory, Energy Consumption, and Water
Withdrawal Data for 2024**

Opinion Date: 2025-04-26

To the Management of:	Manufacturers Life Insurance Company 200 Bloor Street East Toronto ON M4W 1E5 Canada
Independent Verification Opinion of:	OmnexFuturepast 315 E. Eisenhower Pkwy, Ste 300 Ann Arbor, Michigan 48108 USA
Subject Matter:	MIMRE Greenhouse Gas Emissions Inventory, Energy Consumption, and Water Withdrawal Data for 2024
For the Period:	January 1, 2024 – December 31, 2024

Details Pertaining to the Statements

Statement of Responsibility:

It was the responsibility of Manufacturers Life Insurance Company (“Manulife”) to prepare the Manulife Investment Management Real Estate (“MIMRE”) greenhouse gas (GHG) inventory statement in accordance with the WRI/WBCSD GHG Protocol Corporate Accounting and Reporting Standard (including the Scope 2 and Scope 3 updates issued in 2015 and 2013, respectively). It was the responsibility of Manulife to prepare its GHG activity data (for both the 2024 reporting year and the re-stated 2019 base year), energy consumption data, and water withdrawal data in accordance with its own internal data management and reporting criteria. This responsibility includes designing, implementing and maintaining a data management system adequate for the preparation and fair presentation of the statements. Manulife is responsible for the fair presentation of its data and information and for ensuring that these are free from material misstatements.

Based on the work we performed, it was the responsibility of OmnexFuturepast to express an opinion as to whether the MIMRE GHG emissions, energy consumption, and water withdrawals as stated by Manulife for the 2024 reporting year were presented fairly in accordance with the agreed criteria. It was also the responsibility of OmnexFuturepast to express an opinion on the percentage change in MIMRE GHG emissions from the 2019 base year to emissions reported for 2024.

Intended User and Limitation of Liability

Intended User:

This report has been prepared for the management of Manulife for internal management purposes and for public disclosure.

Limitation of Liability:

Manulife is solely responsible for the preparation and presentation of the information it has submitted to OmnexFuturepast for verification. Our role is limited to expressing a conclusion as to whether the disclosures as stated by Manulife are presented fairly in accordance with the agreed-upon criteria. In doing so, we do not assume any duty, liability, or responsibility of Manulife or of any third party. Our duties in relation to the opinions expressed are owed solely to Manulife. As such, we do not accept any responsibility for any loss allegedly occasioned by any third party acting or refraining from action because of our expressed opinions.

Details Pertaining to the Validation/Verification Body

OmnexFuturepast's Role:

OmnexFuturepast is an impartial third-party validation/verification body.

Declaration of Impartiality

Evaluation of Actual or Potential Conflicts-of-Interest

OmnexFuturepast, and the verification team members and independent reviewer, have evaluated their potential for compromised impartiality and found no actual or potential threats to impartiality with respect to the performance of this engagement.

Details Pertaining to the Verification Team and Independent Reviewer

Verification Team Leader:

This verification was led by Stephen Boles.

Verification Team Members:

Mark Lutz assisted the team leader in the execution of this verification.

Independent Reviewer: This verification was independently reviewed by John Shideler

Details Pertaining to the Verification

Type(s) of Engagement: Verification

Objectives of the Verification:

1. To provide limited assurance to Manulife that there is no evidence that the MIMRE GHG Statement, energy consumption, and water withdrawal disclosures made by Manulife for the 2024 reporting year are not materially correct and are not in conformance with the stated criteria.
2. To provide limited assurance to Manulife that there is no evidence that the percentage change in MIMRE GHG emissions from the 2019 base year to the 2024 reporting year as stated by Manulife are not materially correct and are not in conformance with the stated criteria.

Scope of the Verification:

Facilities, physical infrastructure, activities, technologies, and processes	Manulife is a leading international financial services group with their global headquarters in Toronto, Ontario, Canada. Manulife has over 38,000 employees in Canada, USA, Asia, and Europe. GHG inventories from financial services firms like Manulife include Scope 1 emissions, Scope 2 emissions from consumption of imported energy, and several categories of Scope 3 emissions.	
Greenhouse gas sources, sinks, and reservoirs	GHG Scope	GHG Source
	1	Stationary Fuel Combustion
	1	Fugitive Emissions (refrigerant recharge)
	2 (location- and market-based)	Imported electricity and steam
	3 (Category 3)	Upstream Fuel/Energy Impacts
	3 (Category 5)	Waste Generated in Operations
	3 (Category 13)	Downstream Leased Assets

Types of greenhouse gases	Manulife calculates and reports CO ₂ , CH ₄ , N ₂ O, and HFC emissions.
Other disclosures included in scope of verification	<ul style="list-style-type: none"> • Energy consumption • Water withdrawals • percentage change of GHG emissions from 2019 to 2024
Time period	January 1, 2024 – December 31, 2024

Level of Assurance:	Limited
Threshold of Materiality:	5%
Verification Criteria:	OmnexFuturepast performed this in accordance with the requirements of ISO 14064-3:2019.

Description of Work Performed

OmnexFuturepast designed and executed analytical procedures and controls testing on a risk-based approach after reviewing Manulife's reported disclosures. OmnexFuturepast performed the following assessments of information and data during the verification:

Description of the Basis for Our Conclusions and Opinion

1. Assessment of the geographic and temporal boundaries of Manulife's disclosures.
2. Tracing of GHG calculations in the consolidated statements to confirm the accuracy of reported values.
3. Review for accuracy of GHG emission factors and calculation methodologies.
4. Comparison to prior year results of GHG emissions and key input data values (e.g. fuel consumption).
5. Assessment of the reasonableness of assumptions (including Manulife's definition of non-relevant sources of GHG emissions).

The data reviewed were historical in nature.

Summary of the Responsible Party's Statements

Manulife's 2024 MIMRE GHG totals are presented in the table below:

GHG Scope and Source	GHG (t CO ₂ e)	% Change Against 2019 Base Year
SCOPE 1		
Stationary Fuel Combustion + Fugitive emissions	28,440	-17.1
SCOPE 2		
Location-based	67,911	-26.7
Market-based	67,591	-27.1
Total – Scopes 1 + 2 (Location-Based)	96,351	-24.1
Total – Scopes 1 + 2 (Market-Based)	96,031	-24.4
SCOPE 3^{1,2}		
Category 3 (Upstream Fuel and Energy Impacts)	8,387	Comparison data for 2019 not available
Category 5 (Waste Generated in Operations)	5,961	
Category 13 (Downstream Leased Assets)	68,653	
Total Scope 3	83,001	
Total – Scopes 1, 2, 3 (Location-Based)	179,352	
Total – Scopes 1, 2, 3 (Market-Based)	179,032	

¹ The following Scope 3 categories have been deemed not relevant to Manulife: upstream and downstream transportation and distribution, processing of sold products, use of sold products, end-of-life-treatment of sold products, franchises.

² The following Scope 3 categories are being reported in the Manulife MFC GHG inventory: purchased goods and services, capital goods, business travel, employee commuting, upstream leased assets, investments (Category 15).

Manulife's 2024 MIMRE energy consumption totals are presented in the table below:

Energy Source	Equivalent kWh (ekWh)
Natural Gas	139,752,291
Diesel	601,514
Steam and chilled water	16,339,446
Electricity (grid-supplied)	336,825,399
Green power	2,324,013
Total³	495,842,663

³ Energy use includes electricity, steam and chilled water, combustion of natural gas, and diesel fuel from stationary sources for Scope 1 and 2 emissions sources. A portion of total energy use came from green power purchases in 2024.

Manulife's 2024 MIMRE water withdrawal and percentage change of GHG emissions from the 2019 base year to 2024 are presented below:

Disclosure Item	Reported Value
Water withdrawals	1,773,331 m ³

Limitations, If Any

None

Modifications, If Any

Manulife's MIMRE 2024 GHG inventory did not fulfil all requirements for public disclosure listed in the GHG Protocol, Chapter 9, "Reporting GHG Emissions", including:

Emissions data for all seven GHGs separately (CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, NF₃) in metric tonnes and in tonnes of CO₂ equivalent

Conclusions

Except for the modification listed above, and based on our evaluation of the evidence, nothing comes to our attention which causes us to believe:

- That Manulife's disclosures of MIMRE GHG emissions, energy consumption, and water withdrawals for the period from 01/01/2024 to 31/12/2024 are not materially correct and are not a fair representation of its data and information, and
- That Manulife's MIMRE GHG inventory report for the period from 01/01/2024 to 31/12/2024 has not been prepared in accordance with the World Resources Institute/World Business Council for Sustainable Development's "The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard – Revised Edition" (March 2004) as amended in 2013 and 2015, and
- That the percentage change in GHG emissions for MIMRE from 2019 to 2024 is not materially correct and is not a fair representation of its data and information.

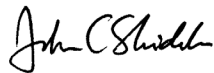
Approvals

Verification Team Leader:



Stephen Boles, 17 April 2025

Independent Reviewer:



John C. Shideler, 18 April 2025

Signature

Verification/Validation Body: OmnexFuturepast, Ann Arbor, Michigan USA

Opinion Issued: 2025-04-26

