



 **Manulife** Investment Management

# Our *focus* on sustainability

2019 Real Estate  
Sustainability Report



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Global Head of Real Estate

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# Letter from our Global Head of Real Estate

Bill McPadden



Within Real Estate, our goal is to have positive, lasting impacts through our products, services, operations and investments—all of which help build stronger, more resilient communities where we live and operate.

Each year, we look back on our achievements and the people and communities we've positively impacted. Our annual Sustainability Report is an opportunity for us to share what we're doing, recognize the contributions of our colleagues and inspire those around us to make a difference, too.

In this report, we outline how sustainability is embedded throughout Manulife Investment Management's Real Estate arm. We'll examine how environmental, social and governance (ESG) standards guide our business and why this matters to our stakeholders.

Tenants in our buildings want healthy and efficient workspace. Employees care about their personal wellness and are increasingly interested in tackling the pressing issues facing humanity today. Forward-thinking investors seek to own buildings that are built to last and align themselves with a manager who stays ahead of risks and opportunities—

from changing market and societal trends to emerging regulations and new technologies.

Based on this philosophy, we are pleased to share some of our most notable achievements from 2018. In 2018, we proudly:

- Achieved a "Green Star" ranking in all five of our Global Real Estate Sustainability Benchmark (GRESB) submissions, signalling our strong commitment to sustainability management and performance;
- Reduced utility costs by \$1.25 million;
- Increased our green building certifications to 80% of our global portfolio;
- Rolled out our global Sustainable Building Standards program.

We also welcomed Regan Smith, our new Sustainability Director, to our team. With a depth of sustainability and green building knowledge, Regan leads our centre of sustainability expertise and oversees our sustainability program and initiatives,

including our network of 150 green champions. Regan is a valuable asset to our team and we are glad to have her on board.

We view sustainability as a never ending journey. To be successful, we must continually push forward. Push for the transformation we want to see in ourselves and push for the transformation we want to see across the globe. It will take commitment, innovation and a radical shift in the way we think. It will require collaboration with our tenants, partners, suppliers, communities and employees to achieve real impact.

We are surrounded by an amazing team, and when we think big, anything is possible.

Sincerely,

A handwritten signature in blue ink that reads "Bill McPadden". The signature is stylized and fluid.

Bill McPadden | Global Head of Real Estate

## Sustainability matters

"We are one company **united** around the globe. To be successful, we must leverage our **diversity** and realize our strengths as a **team**. It is with your continuous commitment to deliver on our sustainable objectives that we will get it done, *together*."

— Bill McPadden, Global Head of Real Estate



# This is what our *impact* looks like

## 14,300 MWh

Saved 14,300 MWh of electricity—equivalent to the electricity used by approximately 1,280 homes

## \$1.25 million

saved in energy and water utility costs

## 53%

Average portfolio waste diversion

## 65,700 m<sup>3</sup>

Consumed 65,700 m<sup>3</sup> less water—equivalent to the water needed to fill 26 Olympic-sized swimming pools

## 48.2 M SF

certified to a green building standard, representing 80% of our global portfolio

## 51.4 MWh

Purchased 51.4 MWh of renewable energy

# Sustainability Highlights

## 2018 Performance highlights

Manulife Investment Management's Real Estate arm is progressing towards our five Sustainable Real Estate Policy commitments.

### Minimize our environmental impact

Participated in the UNEP FI TCFD Real Estate working group

Rolled out an automated utility tracking and reporting system

### Promote responsible business practices

Recognized as a Green Lease Leader as designated by the Institute for Market Transformation and the U.S. Department of Energy

Achieved PRI Direct Property Investing score of "A"

### Support health and wellness

Integrated wellness design features into our Corporate office design standards

### Be accountable for our performance

Achieved "Green Star" ranking in all five GRESB submissions

Met level 1 or higher on Sustainable Building Standards for all properties

### Engage our stakeholders

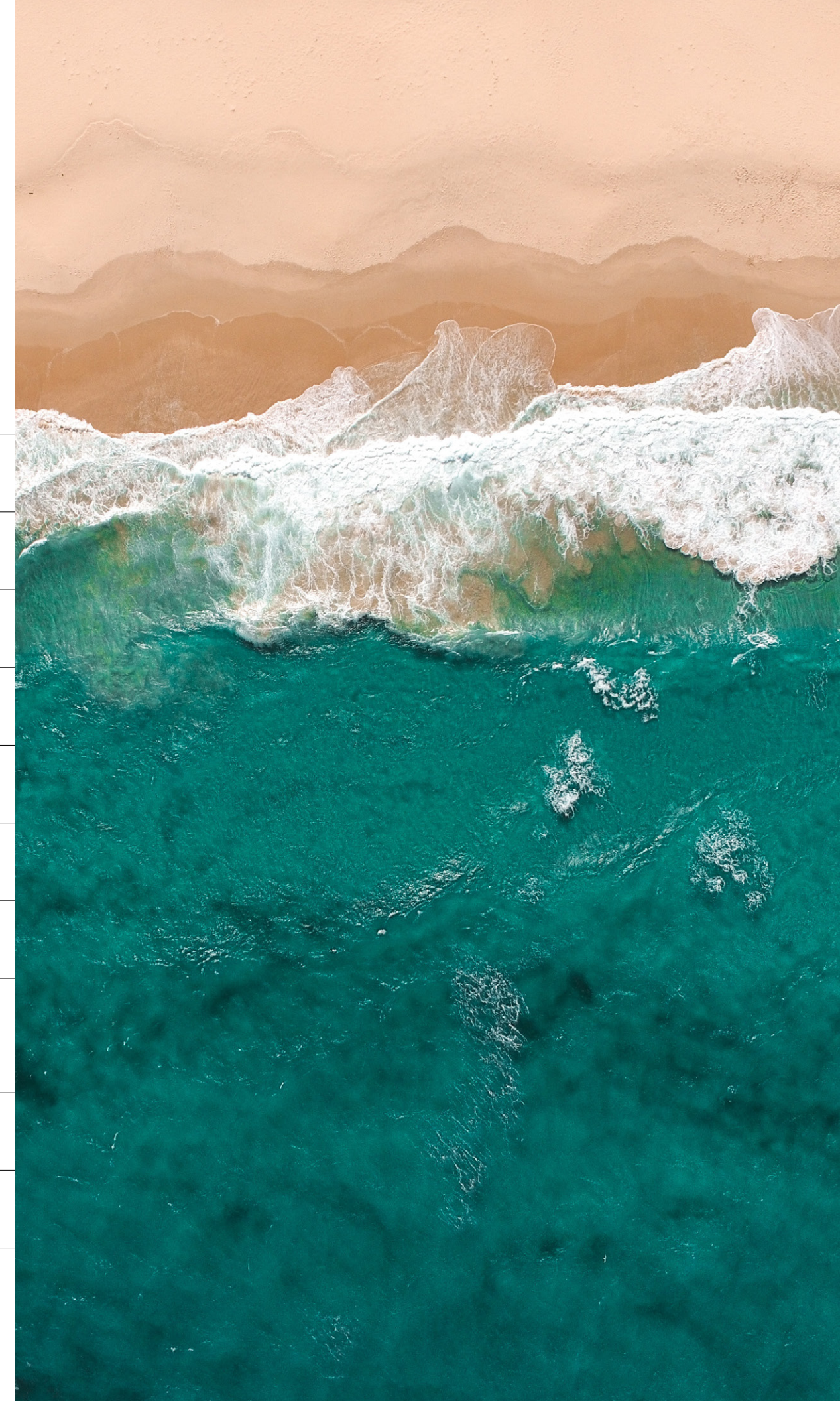
Established a community of 150 property Green Champions

# Sustainability Objectives

## 2018 Performance highlights

We made great *progress* on our **2018 sustainability objectives**:

2018 Objective	Status
Implement sustainability clauses into the standard lease	Achieved: Embed into standard Canadian lease
Apply for Green Lease Leader designation	Achieved: Recognized at silver level
Achieve level 1 or higher on all our Sustainable Building Standards at all properties	Achieved: Level 1 standards met at all properties
Implement utility bill management system	Achieved: Rolled-out system in North America
Achieve “Green Star” ranking for all GRESB submissions	Achieved: For all funds and the General Account
Complete renewable energy strategy for a portion of the global portfolio	Achieved: Outlined renewable energy strategy for Corporate portfolio
Develop a business plan for tenant health and wellness and offering clean energy to tenants in the U.S. and Canadian markets	Achieved: Outlined plan for tenant health and wellness and clean energy offering for tenants
Achieve above 60% certification rate for the global portfolio (General Account and funds)	Achieved: Increased global portfolio green building certification rate to 80%
Reduce energy and water consumption by 2% and 1.5% for the global portfolio	Partly achieved: Reduced energy and water consumption 0.5% and 5.9%, respectively
Hire a sustainability director	Achieved: Welcomed Regan Smith, B.Sc., B.A.Sc, LEED AP, WELL AP, RESET AP as Sustainability Director





# The Way Forward: 2019 Sustainability Objectives

Our Executive Sustainability Steering Committee sets **annual sustainability objectives** that focus our efforts and outline key milestones in our strategy.

Here are our outlined **objectives for 2019**:

- 1** Level up in Sustainable Building Standards (achieve average Level 3 for office, 2 for residential and maintain 1 for industrial and retail)
- 2** Launch an annual tenant engagement program, with a monthly campaign calendar, and track participation
- 3** Achieve 2% energy and 1.5% water average reduction for the global portfolio as part of our 5-year targets
- 4** Create an internal sustainability recognition program
- 5** Pursue the Fitwel health and wellness standard at five buildings
- 6** Improve or maintain GRESB scores across all funds

# Real estate sustainability integration framework

## Our Vision

The integration of sustainability within Manulife Investment Management's Real Estate portfolio starts with our vision. Our vision is to drive leadership in sustainable real estate across our global organization. In collaboration with our tenants and community partners, we provide healthy and efficient workplaces for our customers while enhancing our long-term returns.

## Leadership Strategies

## Sustainable Real Estate Policy

## Sustainability Practices

Developments • Investments • Operations • Asset Management

## Reporting and Disclosure

# Our Approach to Sustainability and Responsible Investing

## Our Sustainable Real Estate Policy

Our Sustainable Real Estate Policy details our sustainability focus areas and practices that we embed in our organizational processes and property portfolios. It outlines our five sustainability commitments. For ease of reference, we have organized this report around these five policy commitments.



Minimize our *environmental* impact



Support *health* and wellness



*Engage* our stakeholders



Promote *responsible* business practices



Be *accountable* for our performance

## Our sustainability practices

Our approach to sustainability is based on responsible property investment and aligns with global standards. This means that we incorporate ESG considerations into all our investment management and operational practices across the entire real estate value chain, from construction and acquisition of an asset, through property management and leasing.

We formalized sustainability practices for developments, investments, operations, asset management and leasing. These practices are supported by tools such as our Sustainability in Investment and Due Diligence Checklist, sustainability clauses in our standard lease and

our Sustainable Building Standards. We also require third-party managers, who manage properties on our behalf, to adhere to our standard practices and use our tools.

To build capacity and capability, we provide our employees with training, both in person and through our online training platform.

Finally, to ensure we are accountable to all stakeholders, we report on sustainability performance using global standards, including the Principles for Responsible Investment (PRI) and the Global Real Estate Sustainability Benchmark (GRESB).

"Our Sustainable Building Standards provide a consistent sustainability experience at the property level and a clear roadmap for improvement."

— Regan Smith, Director of Sustainability



## Our Sustainable Building Standards

Our Sustainable Building Standards program is one of our most important sustainability leadership strategies. This is because ongoing property operations make up the bulk of our environmental impact (energy, water, waste, greenhouse gas emissions) and are the focus of our interaction with employees, tenants, community members and other stakeholders.

Our Sustainable Building Standards are designed to:

- Build a consistent sustainability experience for tenants, employees and visitors
- Enable benchmarking of sustainability performance and understanding of business outcomes
- Provide tools and resources for property teams

Consisting of 13 standards that align with our Sustainable Real Estate Policy commitments, the program covers all our material sustainability focus areas for our operating portfolio—from energy management to tenant engagement and health and wellness. To facilitate implementation, certification and reporting, the program also aligns with industry best practices, including GRESB, LEED® and BOMA BEST®.

Each Standard has 5 levels. Level 1 is a baseline that all properties can achieve; Levels 2 and 3 generally equate to good practice for any office assets; Levels 4 and 5 denote leadership and often align with LEED standards.

The levels for the Energy Management standard look like this:

### Energy Management Standards – Levels

1	Energy management plan in place
2	Walk through energy audit conducted every 5 years
3	Detailed energy audit conducted every 5 years
4	Retro-commissioning conducted every 10 years
5	Ongoing monitoring, targeting and reporting program

In 2018, we rolled out our standards globally. In the first half of the year, properties set baseline levels, which were reported to Regional Managing Directors and Heads of Real Estate.

Our year-end goal was for all properties to meet Level 1 in every standard, including industrial properties, third-party managed properties and properties in Asia. We are happy to report that we met this objective.

Our 2019 objective is to maintain an average level of 1 for industrial properties and to achieve an average level of 2 for residential buildings and 3 for office assets.

Throughout this report, you will see references to our Sustainable Building Standards and more detailed examples of how they apply across our portfolio.

## Centre of sustainability expertise: Another key leadership strategy

One of our sustainability leadership strategies is to foster and connect a centre of sustainability expertise within our group. We advanced this strategy with two major initiatives in 2018: the addition of Regan Smith, our new Sustainability Director, and the establishment of our Green Champion community.

With more than 15 years of real estate and green building consulting, Regan supports sustainability integration across our organization and portfolio. She joins our Engineering and Technical Services team, a group that provides expert guidance on operational excellence, resource management, development and compliance.

As part of the Sustainable Building Standards roll out, we established a community of 150 Green Champions, including both Manulife Investment Management and third-party managers, who act as property point people for sustainability. The Green Champions work with Regan and other sustainability leaders in the organization to execute sustainability programs at the property level.





# Minimize our *environmental* footprint

Resource Management

Environmental Performance

Green Building Certifications

Climate Change Management

# Resource Management

## Resource management matters to us and our stakeholders

Resource management matters because it reduces operating costs, minimizes our environmental impact, mitigates utility price increases and contributes to cost savings for our investors and tenants.

Buildings consume substantial amounts of energy and water and generate approximately 40% of greenhouse gas emissions, globally. As building owners and managers, we minimize our environmental impact by investing in resource efficiency and embedding conservation practices into our operations.

Four Sustainable Building Standards directly target energy, water and waste management. Low-level standards require properties to develop management plans, communicate with tenants and identify conservation opportunities. Higher levels focus on sub-metering, recommissioning and achieving high waste diversion.

## Our environmental data management system

To automate utility tracking and reporting, in 2018 we implemented a new environmental data management system. This system provides high data quality and reporting and saves our property managers time.

To improve transparency, we also work with our tenants to collect data and deepen our understanding of building performance. In 2018, we collected utility data from 99% of our portfolio for properties where Manulife Investment Management or third-party managers pay utilities.

## Energy, water and waste targets

We analyze energy, water and waste performance to identify conservation opportunities and support decision-making.

We have five-year energy, water and waste targets, along with a long-term greenhouse gas target that aligns with national and international goals. Targets encourage our asset and property managers to manage sustainability like any other business issue, identifying cost-saving opportunities and do their part to help reduce our environmental impact.

To meet targets, we include efficiency projects in budgeting and capital plans. Operationally efficient investments not only support our targets but differentiate our buildings as consistently strong performers. For example, in the last two years, 980 Howe in Vancouver has received three of The Outstanding Building of the Year (TOBY®) awards.

## 2017–2022 Real Estate portfolio environmental targets

7.5%

Reduction in water

65%

Waste diversion rate

10%

Reduction in energy



## CASE STUDY

Steve Cruttenden—  
Providing expert  
guidance as Director  
of Technical Services



When it comes to building operations, Steve Cruttenden is the expert. Steve has worked for Manulife Investment Management for over 30 years and, as Director of Technical Services, he ensures all our buildings—whether suburban mixed-use or AAA downtown offices—operate as efficiently as possible. Efficient buildings save money for our tenants. For example, two of Steve’s projects saved tenants at 8 Cross Street, in Singapore, and 17911 Von Karmen Avenue, in California, \$250,000 and \$41,000, respectively.

Together with our entire Technical Services team, Steve is one of the key reasons our buildings operate above industry standard when it comes to energy efficiency.

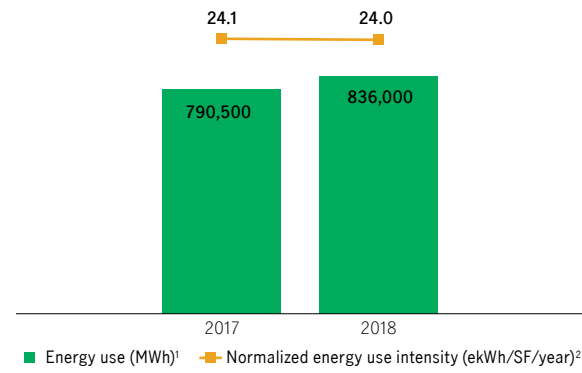
# Environmental Performance

## We focus on operational efficiency and technology to reduce costs and our environmental footprint

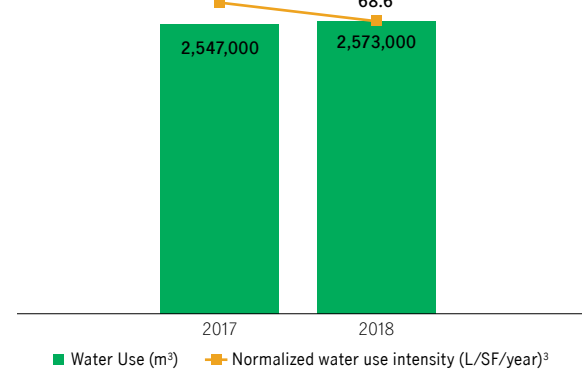
We continue to improve utility performance across our portfolio each year. Our clients benefit from these reductions and in 2018, we saw a \$1.25 million decrease in total utility costs from 2017.

To align with our 2022 energy and water targets we updated our normalization methodology and set 2017 as our baseline year. To enable accurate comparisons, we normalize energy use intensity for occupancy, weather and extraordinary usage such as data centres, and water use intensity for occupancy and extraordinary usage.

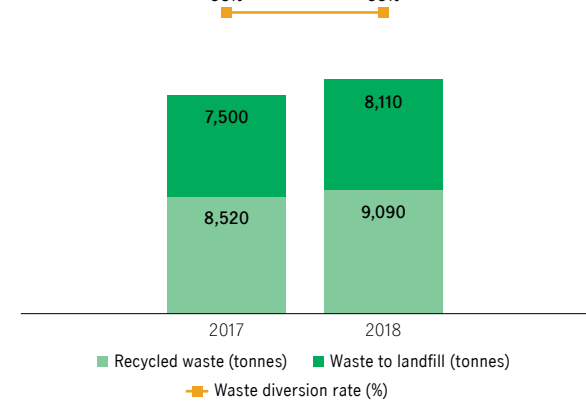
2017-2018 energy use and intensity



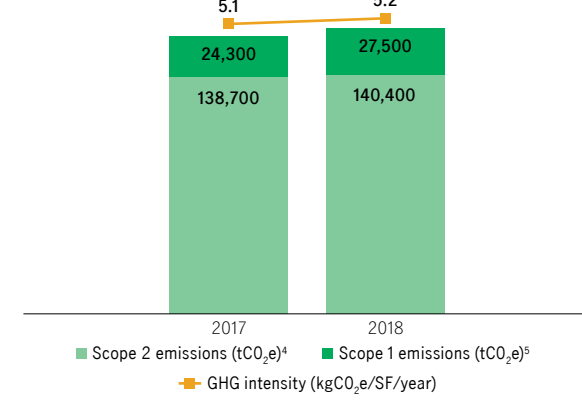
2017-2018 water use and intensity



2017-2018 waste generation and diversion rate



2017-2018 greenhouse gas emissions and intensity



### Energy

Our total energy footprint is 836,000 equivalent megawatt hours (eMWh). Total energy increased between 2017 and 2018 because of increased reporting and changes in weather. When these factors are controlled or “normalized”, our “like-for-like” consumption was consistent.

Across our global portfolio, normalized energy use intensity decreased 0.5% to 24.0 ekWh per square foot (SF). This is below our annualized energy target of 2%. Among offices, our intensity of 24.0 is lower than the 25.5 ekWh/SF Canadian ENERGY STAR benchmark and higher than the 19.7 ekWh/SF US ENERGY STAR benchmark.

### Water

Our 2018 water consumption was just over 2.5 million m<sup>3</sup>. The increase compared to 2017 was a result of an increase in reporting. When normalizing for these factors, water consumption decreased 65,700 m<sup>3</sup>. This reduction is the equivalent to leaving a conventional sink tap running for almost 15 years.

Our normalized water intensity decreased by 5.9% between 2017 and 2018, surpassing our annualized target of 1.5% and making significant progress toward our 5-year 7.5% reduction target.

### Waste

We increased our waste reporting scope in 2018. 87% of our portfolio reported waste and diversion rates where Manulife Investment Management and third-party managers oversee waste contracts compared to 81% in 2017. Reporting gaps persist where waste haulers do not provide waste and recycling weights.

Our total waste generation increased to 17,200 metric tonnes (MT) due to the increased reporting. When comparing our “like-for-like” portfolio, waste generation decreased by 1,500 MT. Our average diversion rate for 2018 was 53%, consistent with 2017. Our average diversion rate has increased 9% since 2016 and we are progressing toward our 2022 average diversion target of 65%.

### Greenhouse Gas Emissions

In 2018, our GHG footprint was 167,900 metric tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e). Our greenhouse gas intensity increased to 5.2 kgCO<sub>2</sub>e/SF. The increase in GHG emissions is a result of an increase in natural gas and steam consumption and the electricity grid in select regions having a greater carbon intensity compared to 2017.

### Next steps

We are making progress towards our five-year targets; however, ensuring continued reductions requires constant focus and investment. For example, while we achieved significant electricity and energy cost savings in 2018, we fell short of our annualized energy target due to increases in steam and natural gas. Annual fluctuations are expected, which is why we set 5-year targets and focus on continual improvement.

In 2019, we aspire to advance our energy management systems, enhance internal reporting and training and embed energy targets considerations into day-to-day operations and asset management decisions. To better understand our assets and our downstream environmental impact, we will continue to work with tenants to collect data from their operations.

### Goals for 2019

- Promote strong utility management practices detailed in our Sustainable Building Standards
- Increase the amount of advanced utility tracking systems in the portfolio
- Provide additional utility management training to operations teams
- Enhance utility performance reporting to key decision makers
- Identify new technologies to enhance performance in already efficient buildings

<sup>1</sup> Energy data includes electricity, natural gas, heating oil and steam consumption. <sup>2</sup> Energy intensity is normalized for weather, occupancy (where data is available) and extraordinary use. <sup>3</sup> Water intensity is normalized for occupancy (where data is available) and extraordinary use. <sup>4</sup> Scope 1 includes emissions from natural gas and other fuels. <sup>5</sup> Scope 2 includes emissions from purchased electricity, steam and chilled water.

# Green Building Certifications

## Third-party certifications demonstrate our sustainability commitment

Green building certifications assure tenants and stakeholders of a minimum building performance standard. Studies show that certifications not only demonstrate best-in-class sustainability management, but they also provide economic value through higher rents, lower vacancy and improved environmental performance.

Demand for certified buildings is evident. Within major Canadian and U.S. markets, green building certified office space has increased to over 50% and 23% respectively since 2006.

In our latest tenant survey, 70% of office respondents said green building certifications are “important” or “very important” to their company.

## Certifications: The focus of one of our Sustainable Building Standards

Green building certification is a critical component of our sustainability program. It is also the focus of one Sustainable Building Standard: Certifications and Sustainability Brand.

Depending on the market, we certify to different standards, such as Leadership in Energy and

Environmental Design (LEED®), Building Owners and Managers Association (BOMA BEST®) and the ENERGY STAR™ certification program.

Because we manage buildings globally, we use regional standards best suited to the local market, including Comprehensive Assessment System for Built Environment Efficiency (CASBEE) in Japan, Green Star in Australia and HK BEAM in Hong Kong.

## 2018 results: Global certified space increased to 80%

In 2018, we surpassed our certification objective, increasing our global certified space to 80%—a 20 percentage point improvement over 2017.

We certified 11 properties to LEED with 1.4 million square feet receiving a first-time designation. We also expanded our BOMA BEST Portfolio Program, certifying an additional 10 million square feet.

## Next steps

For 2019, we are targeting several properties in Canada and the U.S. for LEED certification. We are also assessing other standards such as Wired Score and health and wellness certifications like WELL™ and Fitwel to showcase our dedication to property excellence.

80% of our portfolio is green building certified<sup>1</sup>

48.2 M SF\*

Total certified

35.0 M SF

BOMA BEST/360, 59% of portfolio

12.8 M SF

ENERGY STAR, 21% of portfolio

14.9 M SF

LEED (O+M, CS, BD), 21% of portfolio

0.3 M SF

OTHER, 1% of portfolio

As of December 31, 2018.

\*Totals from different certification standards do not sum as properties with multiple certifications are only counted once

<sup>1</sup>Square footage for certifications based on gross floor area (GFA)



## CASE STUDY

# One Bay East—Sustainable Achievement of the Year



Manulife Tower at One Bay East is a class A office building located in the emerging Kowloon East business district of Hong Kong. Housing Manulife’s Hong Kong corporate offices, the tower is certified LEED Gold and the office space fit-out is LEED Platinum.

One Bay East has also won the Royal Institute of Chartered Surveyors (RICS) Award for Sustainability Achievement of the Year twice, first in 2016 and most recently in 2018. This award recognizes buildings that use innovative technology and teamwork to deliver measurable environmental benefits.

For One Bay East, this includes initiatives that:

- Promote healthy occupant working, living and eating through behavioural change campaigns
- Achieve energy and cost savings of up to 16% with our Central Chiller Plant Optimisation system
- Educate employees and other stakeholders through information sessions and guided tours that demonstrate innovative technologies and strong building performance



MINIMIZE OUR ENVIRONMENTAL FOOTPRINT

# Climate Change Management

## Climate change impacts all our stakeholders

Investors and the real estate industry are increasingly focused on climate change. This is evidenced by international collaborative initiatives like the Task Force on Climate-Related Financial Disclosure (TCFD) and the integration of resilience into the GRESB Assessment.

Climate change poses physical risks to our buildings, communities and the planet through storms, floods, intense heat, water stress and rising sea levels. Transitioning to a low carbon economy poses its own risks, including rising operational costs, increased regulation and carbon taxation and lower demand for inefficient buildings. That being said, climate change also presents opportunities to innovate, stay ahead of the curve and cater to new customer expectations.

## Managing climate change: Mitigation and adaptation

Within Real Estate, we manage climate change through mitigation: reducing greenhouse gas emissions and transitioning to a low carbon economy; and adaptation: preparing for a changing climate and increased chance of extreme weather.

Our primary strategy to reduce greenhouse gas emissions is to increase energy and water efficiencies. We invest in clean technology, including energy storage systems and photovoltaic solar energy. In 2018, with the help of our Renewable Energy Working Group, we engaged a major North American solar developer to analyze portfolio renewable energy opportunities.

We also purchase renewable energy credits across North America. In 2018, we purchased more than 51,400 MWh of renewable energy credits, over 9% of our total electricity consumption. This not only offsets our own emissions, it encourages clean energy development throughout our industry and regions.

We support our tenants and visitors in their clean economy transition efforts. For example, our tenants have access to secure bicycle storage and over 200 electric vehicle (EV) charging stations. In 2018, we also developed a plan to facilitate green power purchasing for our tenants and interviewed key tenants from across our portfolio to validate the concept.

Our ability to adapt to climate change builds resilience in our assets and throughout our business.

We have many practices that foster adaptation and resilience. For example, during the asset acquisition process, our Insurance and Technical Services team conducts on-site assessments to identify and recommend measures that allow us to adapt to natural hazards. Our insurance platform also assesses risks on an ongoing basis and helps implement measures to reduce risks. We are currently participating in a TCFD working group to further our understanding of our portfolio climate risks.

## Next steps

We plan to integrate climate change management into our Sustainable Building Standards to help our property teams better understand and address climate risks.

We will also continue to look for opportunities to integrate renewable power into our portfolio. We want to explore collaboration opportunities through our Renewable Energy Working group to acquire clean power on a large scale.

"980 Howe is a true example of our uncompromising approach to quality and commitment. It demonstrates our continued focus on achieving the highest standards of excellence across our global portfolio."

— Ted Willcocks, Global Head of Asset Management, Real Estate

## CASE STUDY

### 980 Howe is best in class

Kudos to our team at 980 Howe! This 16-storey, AAA office building in downtown Vancouver was recognized as Best in Class in BOMA's first ever Net Zero Challenge Awards.

This award recognizes industry-leading buildings that are progressing towards net zero energy and carbon. Net zero means that the total building energy use is minimized and provided by renewable sources.

As part of BOMA's net zero challenge program pilot, the team at 980 Howe worked with BOMA to showcase climate change mitigation and adaptation. In addition to energy efficient systems, 980 Howe uses free and passive cooling during shoulder seasons and, for additional savings, has occupancy and daylight harvesting sensors. The building is also equipped with an innovative water system which diverts rain water to a 10,000-litre underground cistern that manages storm water and fully supports and sustains landscaping irrigation.



# Support *health and* wellness

Space Design and Stakeholder Support



SUPPORT HEALTH AND WELLNESS

# Space Design and Stakeholder Support

## Wellness has always, and continues to be, one of the main pillars of our business

As a company with roots in promoting public health, wellness is ingrained in our business and is a key part of our sustainability vision. As an investor and manager of real estate, we are committed to helping our tenants and employees live better lives.

Wellness is good for everyone's business. Research shows that the wellness features and programs in green buildings improve employee productivity, with 26% higher cognitive function scores and other benefits, such as 6% higher sleep scores. They also reduce absenteeism and health care costs.

According to our recent tenant satisfaction survey, over 74% of our tenants want healthy work environments and 72% indicated that wellness features, like access to exercise and healthy food options, were "important" or "very important".

## Wellness in our buildings

When designing buildings, we consider natural lighting, indoor climate control and access to outdoor spaces. We also provide wellness amenities, such as fitness centres, and we continuously promote healthy behaviours like good nutrition, taking the stairs and active work breaks.

Our Indoor Environmental Quality Sustainable Building standard covers air and water quality testing and green cleaning. The Health and Wellness standard addresses wellness features and programming and encourages properties to promote healthy habits for all tenants.

## Wellness for our employees

As outlined in our Health and Well-Being in the Workplace Policy, we are committed to providing employees with programs and benefits that promote their physical, emotional, social and financial safety and wellness.

For example, in 2018 we consolidated our Boston corporate offices to the Back Bay area which provides employees with greater access to the MBTA Commuter Rail, subway system and many biking and walking options. Our space provides employees with wellness features, such as natural lighting, adjustable-height desks and the flexibility to work remotely. In our Montreal office, active design encourages our employees to use stairs over escalators and select workstations have treadmills so employees can exercise while they work. On-site bicycle storage and shower rooms also encourage active transportation.

## Next steps

We plan to expand health and wellness programs across our portfolio and pursue wellness certifications where appropriate. Manulife Tower in Hong Kong is pursuing WELL™ certification and our Corporate Real Estate teams are piloting Fitwel certification at five properties in Canada, the U.S. and Asia.

Lessons learned in these programs will inform future standards and programming throughout our investment portfolios.

## CASE STUDY

# A decade of health and wellness at York Mills Centre



Health and wellness may be an emerging trend in real estate, but for York Mills Centre, a LEED Gold certified building in Toronto, it has been standard practice for over 10 years.

Working with a third-party consultant, the team at York Mills Centre established annual wellness objectives and initiated programs and events aimed to improve tenant health and day-to-day life inside the building. The team created monthly wellness themes and engaged tenants in a host of different ways, including direct communications, lobby events and online challenges.

In the last three years alone, York Mills Centre has launched over 70 health and wellness initiatives, reaching over 1,300 participants.

Whether it's a lunch-and-learn event to educate tenants, a walking club to encourage tenants to step away from their desk or a lobby display to promote active living, the team at York Mills Centre continually goes above and beyond to make health, wellness and productivity a priority.



# Engage our *stakeholders*

Tenant Engagement

Employee Engagement and Development

Community Engagement



"Your attention to saving energy and reducing negative footprints on the planet during design, construction and management is impressive and very much appreciated by all of us."

— Building Tenant, BGC Engineering, Inc., 980 Howe



ENGAGE OUR STAKEHOLDERS

# Tenant Engagement

## Working with our tenants for greater impact

We aspire to provide our tenants with high-quality, healthy and sustainable work spaces and best-in-class services. Collaborating with tenants is an integral part of our vision. Since we have similar sustainability objectives, fostering good relationships and encouraging collaboration helps us both achieve our goals and advances sustainability across our industry.

## Biannual tenant satisfaction surveys: Understanding our tenants' needs

In 2018, we surveyed more than 2,000 tenant organizations across 200 of our office, industrial and retail properties. The results indicate that sustainability continues to be an important concern.

Over 86% of office tenants indicated that energy and water efficiency and waste management were either "important" or "very important" and 82% said the same for sustainable building operations. Moreover, 79% of office tenants rated our sustainable building practices as "excellent" or "good", validating our focus on sustainability services, programs and communications.

Following the biannual survey, each property creates an action plan to respond to feedback and address specific requests or areas for improvement.

## Tenant engagement standard

Level 1 of our Tenant Engagement standard requires us to share our sustainability commitments and objectives with tenants and provide tips on how they can support us to achieve this vision. Intermediate levels involve hosting sustainability-themed events and campaigns. Level 5 encourages tenant-landlord collaboration through a green team to achieve mutual sustainability goals.

To engage tenants, our property teams use a host of resources, including tenant sustainability toolkits, communication templates, elevator screens, office posters and targeted campaign materials. Educational events, such as waste management lobby displays and national and global sustainability events, like Earth Week, serve to further educate tenants on sustainability.

## Next steps

In 2019, we will launch a sustainability campaign calendar. Each month we will provide sustainability resources and communications to boost tenant engagement and ensure property-level initiatives are aligned with our global engagement efforts.

## CASE STUDY

### Being green is in your hands—Earth Day event boosts waste diversion



Since our buildings' performance around waste and recycling is largely dependent on occupants participating in our recycling programs, waste management is an important area for tenant engagement.

As part of 2018 Earth Day, our property team at 250 Bloor Street East in Toronto organized the "Being Green is in your Hands" waste management awareness event. Over 170 building occupants took a spin on our waste management "wheel of fortune" to test their knowledge on garbage, recycling, and organics. For "taking a chance on waste", participants received a branded seedling package.

To further improve tenant awareness and boost participation in our programs, the property team installed new recycling signage and upgraded their waste management infrastructure to introduce organics collection at our on-site coffee shop.

Together, these efforts helped divert over 400 metric tonnes of waste from landfills, increasing our waste diversion rate to 68%.

# Employee Engagement and Development

“Our Green Champion community encourages our team to find more creative ways to implement sustainability programs. It helps us communicate and engage more actively with our building tenants, as well as our internal real estate team.”

— Sandra Lewis, Real Estate Assistant, Phipps Tower

## Our employees determine our future success

We strive to be an employer of choice. To attract and retain the best and brightest, we focus on performance management, professional development, wellness, diversity and inclusion. Providing an outstanding employee experience supports exceptional customer service and adds value for all stakeholders.

## Sustainability is a part of every employee's job

Every two years we evaluate employee engagement through digital surveys and develop appropriate action plans to improve our work environment. For our latest survey, we had a response rate of 84%.

Engaging employees in sustainability builds a sense of purpose and empowers our employees to make our sustainability vision a reality.

We ask all real estate employees, including the Global Head of Asset Management, to include a sustainability goal in their personal performance objectives. This embeds sustainability into everyone's role.

Through our sustainability training program, which uses webinars and an online platform, we share our sustainability vision, policy and commitments with every employee. We also provide training and guidance specific to different business unit functions. Over the past two years, we've trained over 230 employees, enhancing their understanding of how and why we embed sustainability in our business.

Employee Engagement is also one of our Sustainable Building Standards. As of 2018, every property meets Level 2, which means that it has nominated at least one Green Champion to act as a property sustainability expert and coordinator. Our Green Champion community meets quarterly to share lessons learned, receive updates on our program and learn about sustainability best practices and other industry news.

## Employee engagement

100%

Employees surveyed for engagement

100%

of properties (150 total) have Property Green Champions

230

Real estate employees trained on sustainability



# Community Engagement

By the numbers

## \$45 M

In 2018, Manulife donated or helped raise \$45 million in community investments.

## 66,848 hours

Manulife supported employees to volunteer 66,848 hours through programs and initiatives



### We invest in local communities

As an investor and manager of real estate, we believe that we have a responsibility to contribute to charities and community organizations and to ensure that our properties play a positive role in the local economy.

### Supporting causes across the organization

In 2018, Manulife donated \$45 million to community partnerships and philanthropic endeavours. As well, 68% of our office portfolio held at least one community event.

Support ranges from sponsoring major events, like the Boston Marathon and the Danang International Marathon, which raise funds for other non-profit organizations, to making space available in our buildings for local community programming and fundraising efforts.

Our real estate Community Engagement standard provides resources to plan or host community events, including local fundraising campaigns, farmers' markets and blood donation drives. Our partnership with Canadian Blood Services, in particular, is a representation of our commitment

to the local communities in which we operate. As a "Give Life Partner", we are officially recognized every November; however, our commitment is year-round. In 2018, over 36 offices supported Canadian Blood Services by hosting mobile donation events, housing a donor centre, organizing group shuttles to a community clinic or advertising nearby donor centres. In total over 7,079 units of blood were donated to support Canada's lifeline.

By providing opportunities for employees to give back at work, Manulife's volunteer programs boost our overall community impact. For example, MatchBoard, a joint initiative of Manulife and Capacity Canada, trains and connects employees to community non-profit organizations. In 2018, our employees volunteered 66,848 hours through programs supported by Manulife.

### Next steps

To encourage our teams to do even more when it comes to local communities, we integrated community engagement initiatives into our 2019 sustainability campaign calendar. This will help us maximize social benefits while minimizing the environmental impact of events and other initiatives.

### CASE STUDY

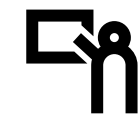
## Calgary team partners with tenants to give back



When our Calgary team was looking for opportunities to engage with their local community, they worked with their tenants to pool support for multiple charities and community organizations.

For example, Calgary's portfolio-wide "Gather & Give" campaign was designed to encourage tenants and Manulife Investment Management Real Estate employees to support their local charities by donating food and household items to local charities. In 2018, our team collected over 1,000 donations for the Calgary Women's Emergency Shelter and the Calgary Interfaith Food Bank.

Our Real Estate teams also partnered with Joe's Garage, a local bike shop, to offer bicycle repair services to our tenants. This program was so well received that we plan to extend it across all Calgary office buildings in 2019.



# Promote *responsible* business practices

Working with Partners, Suppliers and Industry



PROMOTE RESPONSIBLE BUSINESS PRACTICES

# Working with Partners, Suppliers and Industry

## Promoting sustainable and ethical business practices

Collaboration is a common theme in sustainability. To achieve impact beyond the walls of our buildings, we need cooperation from our suppliers, business partners and peers.

As a real estate investor and manager, we can influence the industry by promoting sustainable business practices and ensuring our suppliers and business partners adhere to our high ethical standards. This supports our commitments as a signatory to the Principles for Responsible Investment (PRI) and better positions us to deliver the best-in-class services and long-term investment performance our clients expect.

## Working with our partners at the property level

Although we manage most of the buildings we own, in select asset classes and markets, we also contract third-party managers. In these markets, we incorporate sustainability requirements into their management contracts.

We also work with our third-party managers to adopt our Procurement Program and Tracking standard.

At Level 1, all suppliers learn about our Vendor Code of Conduct. At higher levels, the standard provides guidance on engaging suppliers on sustainable options to increase sustainable procurement spending and impact.

## Promoting sustainability in our industry

As a member of the Global Real Estate Sustainability Benchmark (GRESB), we help to advance industry knowledge, spread best practices and promote leadership around the world.

At the regional level, our building teams promote collaboration and real estate sustainability by participating in programs such as the BOMA Earth Hour, BOMA's Net Zero Challenge pilot project, A Better City, a Boston business collaboration and Toronto's Race2Reduce industry challenge.

Our employees routinely speak about sustainability at events and conferences and several hold leadership positions in key sustainability organizations. For example, Stephen Smith, Regional Managing Director of our western Canada real estate portfolio, is Chair of the Board of the Canada Green Building Council, and Stephen Nicoletti, Regional Managing Director of our eastern Canada real estate portfolio, serves on the BOMA Canada Board of Directors.

## CASE STUDY

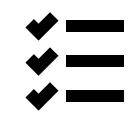
### Japan—adapting company-wide standards to regional markets



Working with our managers is critical to ensuring that our sustainability commitments are achieved across our entire portfolio.

In Japan, our real estate team supports our third-party property managers to meet our global Sustainable Building Standards. They also work closely with our Japanese managers to adapt and develop programs that are applicable to the local market.

Together, the teams participated in our sustainability training and implemented key initiatives to meet our Level 1 standards, including developing energy and water management plans, and an annual tenant engagement plan.



# Be accountable for our *performance*

Sustainability Governance and Reporting

# Sustainability Governance and Reporting

## Embedding sustainability management and transparency to drive improvement

As a large, global organization with a track record of excellence, integrity and ethical business conduct, we apply the same high standards to managing sustainability as we do to managing all other aspects of our business.

## Sustainability governance spans our organization

Our sustainability governance structure spans our organization and links to corporate operations. It addresses both regulatory obligations and voluntary sustainability commitments.

The Global Head of Real Estate, Asset Management chairs our Executive Sustainability steering committee, which consists of senior real estate representatives from key departments and regions. The Committee sets annual objectives, oversees progress towards achieving our sustainability vision while adhering to corporate policies and practices.

Our Sustainability Director sets our sustainability strategy and manages the programs that support our commitments and vision. She also

represents Manulife Investment Management's Real Estate arm on both Manulife Financial Corporation's Sustainability Centre of Expertise and Manulife Investment Management's Responsible Investment Committee.

Through our Sustainable Building Standards, we report semi-annually to our Regional Managing Directors and Property Directors, providing updates on regional sustainability programming and resource efficiency.

## Reporting validates our practices

To validate our practices, monitor progress and support transparency and responsible business practices, we report externally on our sustainability management approach and performance.

Manulife Investment Management's Real Estate team reports annually to the GRESB Assessment on our whole portfolio. Participating in GRESB evaluates our performance relative to peers, identifies strategic improvement areas and communicates our sustainability progress to investors.

Since we began reporting to GRESB in 2016, we have improved our scores every year. In 2018,

all our funds and our General Account earned a "Green Star" ranking, signifying strong performance in sustainability management and performance. Moreover, our entire global portfolio received 5 Stars, the highest possible ranking.

As a signatory to the Principles for Responsible Investment (PRI), we also report on our responsible investment practices. We improved in 2018, earning a score of "A" on the property investing module.

We also contribute to Manulife corporate reporting, including:

- Manulife Financial Corporation's Sustainability Report and Public Accountability Statement
- CDP (formerly the Carbon Disclosure Project) reporting
- Dow Jones Sustainability Index reporting

To learn more about Manulife's governance practices, visit our website:

<https://www.manulife.com/content/corporate/en/about/corporate-governance.html>



# About Us

## About Real Estate

Manulife Investment Management, through its Real Estate arm, develops and manages commercial real estate for thousands of customers around the globe. Its portfolio includes millions of square feet of office, industrial, retail and multi-family space strategically located in major metropolitan markets.

The Real Estate team leverages its vertically integrated platform to serve its customers and investors as well as manage the space requirements and corporate-use facilities for Manulife's global operations. It also extends its asset management capabilities for the benefit of institutional investors through its real estate fund platform.

Additional information can be found at:  
[www.manuliferealestate.com](http://www.manuliferealestate.com)

For more information on our sustainability program, please visit:

<https://manuliferealestate.com/sustainability>

## About Manulife

Manulife Financial Corporation is a leading international financial services group that helps people make their decisions easier and lives better. We operate primarily as John Hancock in the United States and Manulife elsewhere. We provide financial advice, insurance, as well as wealth and asset management solutions for individuals, groups and institutions. At the end of 2018, we had more than 34,000 employees, over 82,000 agents, and thousands of distribution partners, serving almost 28 million customers. As of March 31, 2019, we had over \$1.1 trillion (US\$849 billion) in assets under management and administration, and in the previous 12 months we made \$29.4 billion in payments to our customers. Our principal operations in Asia, Canada and the United States are where we have served customers for more than 100 years. With our global headquarters in Toronto, Canada, we trade as 'MFC' on the Toronto, New York, and the Philippine stock exchanges and under '945' in Hong Kong.

To learn more about Manulife and its commitment to social responsibility, environmental sustainability, and excellence in business conduct and corporate governance, visit:

[manulife.com/sustainability](http://manulife.com/sustainability)

By the numbers

**C\$23.7 B**

Value of assets under management

**25**

Cities

**58 M SF**

Total square feet

**9**

Countries, including Australia, Canada, China, Japan, Malaysia, Thailand, United States, Vietnam and Singapore

**362**

Properties owned, operated and/or managed

**4**

Property types, including office, industrial, multi-family and select retail



# Alignment with Reporting Standards

## Report scope and boundaries

This report details sustainability practices and performance for all real estate holdings owned and/or managed by Manulife Investment Management's Real Estate team. This includes third-party real estate properties managed by us and properties that are held in our life insurance investment portfolios. This also includes properties we manage for investors in our real estate funds and Singapore-based

Manulife US REIT. Our approach to sustainability governance and management is consistent across our real estate portfolio, and our strategy and programs apply to all properties we own and/or manage.

The content of this report was informed by the Global Real Estate Sustainability Benchmark (GRESB) and references the Global Reporting Initiative (GRI) standards summarized in the table below:

GRI Standard (2016)	Disclosure	Content applied	Page
<b>102: General Disclosures</b>	102-1: Name of the organization	<ul style="list-style-type: none"> <li>Name of the organization</li> </ul>	24
	102-2: Activities, brands, products and services	<ul style="list-style-type: none"> <li>Description of the organization's activities</li> </ul>	24
	102-3: Location of headquarters	<ul style="list-style-type: none"> <li>Location of the organization's headquarters</li> </ul>	28
	102-4: Location of operations	<ul style="list-style-type: none"> <li>Regions in which the organization operates</li> </ul>	24
	102-7: Scale of organization	<ul style="list-style-type: none"> <li>Total number of employees</li> </ul>	24
	102-14: Statement from senior decision-maker	<ul style="list-style-type: none"> <li>Statement from the senior decision-maker of the organization</li> </ul>	2
	102-50: Reporting period	<ul style="list-style-type: none"> <li>Reporting period</li> </ul>	26
	102-50: Reporting cycle	<ul style="list-style-type: none"> <li>Reporting cycle</li> </ul>	26
<b>302: Energy</b>	302-1: Energy consumption within the organization	<ul style="list-style-type: none"> <li>Total energy consumption</li> </ul>	11
	302-3: Energy intensity	<ul style="list-style-type: none"> <li>Energy intensity</li> </ul>	11
<b>303: Water</b>	303-1: Water withdrawal by source	<ul style="list-style-type: none"> <li>Total volume of water withdrawn by source</li> </ul>	11
<b>305: Emissions</b>	305-1: Direct GHG emissions	<ul style="list-style-type: none"> <li>Gross direct GHG emissions (MtCO<sub>2</sub>e)</li> </ul>	11
	305-2: Energy indirect GHG emissions	<ul style="list-style-type: none"> <li>Gross location-based energy indirect GHG emissions (MtCO<sub>2</sub>e)</li> </ul>	11
	305-4: GHG emissions intensity	<ul style="list-style-type: none"> <li>GHG intensity ratio for organization</li> </ul>	11
<b>306: Effluent and Waste</b>	306-2: Waste by type and disposal method	<ul style="list-style-type: none"> <li>Total weight of waste</li> <li>Indication of disposal method</li> </ul>	11

# Reporting Boundaries and Definitions

## REPORTING PERIOD

January 1, 2018 to December 31, 2018.

## REPORTING CYCLE

Annual

## DATA METHODOLOGY

**Data coverage:** Data coverage for performance data is outlined where it is presented. If no data coverage is noted, data represents all Manulife Investment Management Real Estate arm properties.

**Energy:** Energy data includes electricity, natural gas, heating oil and steam consumption for base buildings, common areas and tenanted spaces. Energy use intensity has been adjusted for weather and extraordinary usage in the 2018 reporting year.

Average U.S. and Canadian energy intensities derive from the U.S. Environmental Protection Agency, 2012, and the Real Property Association of Canada (REALPAC), 2014. Average water intensities derive from the DC Department of Energy and Environment, 2012 and REALPAC, 2012.

**Greenhouse gas emissions:** Greenhouse gas emissions data includes all office buildings with available data. Methodology for determining greenhouse gas emissions is aligned with the CAN/CSA-ISO 14064-1-06, CAN/CSA-ISO 14064-3-06 and the WRI/WBCSD Greenhouse Gas Protocol standards.

**Environmental targets performance:** Environmental target performance is measured and reported based on a straight average of normalized property energy and water intensity.

## DEFINITIONS

**BOMA BEST®:** Building Owners and Managers Association Building Environmental Standards. This Canadian certification program evaluates properties based on energy, water, waste, greenhouse gas emissions, indoor environment and environmental management systems.

facilities. Australia, Canada, Japan, New Zealand, Taiwan and the European Union have adopted the program.

**ekWh:** Equivalent kilowatt hours. This metric is the standard unit of energy consumption used to aggregate and compare different energy sources (e.g., natural gas to electricity).

**Greenhouse gas emissions:** Gases that trap heat in the atmosphere, raising the average temperature of the planet. They are produced by fossil fuel combustion and industrial, agricultural and waste management processes. They are measured in metric tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e), hence they are also known as carbon emissions.

**Fitwel:** a building certification system for existing buildings that provides guidelines on how to design and operate healthier buildings.

**GRESB:** Global Real Estate Sustainability Benchmark. This institutional investor-sponsored assessment is the global standard for assessing the sustainability performance of real estate companies and funds. In 2018, the assessment had 903 participants from 64 countries, representing \$3.6 trillion in gross asset value.

**LEED®:** Leadership in Energy and Environmental Design. This internationally recognized, third-party certification system rates a building's site, water and energy efficiency, waste management, material selection and indoor air quality. There are different certification programs:

- **NC:** New Construction. This rating program applies to new construction and major renovations of commercial and institutional buildings.

- **CS:** Core and Shell. This rating program is a derivative of NC and applies to buildings where the owner controls 50% or less of the building area that will be built to NC requirements.

- **CI:** Commercial Interiors. This rating program is applicable to tenant improvements of new or existing office space.

- **EB: O+M:** Existing Buildings: Operations and Maintenance. This rating program evaluates the sustainability of ongoing operations of existing commercial and institutional buildings.

**L/SF:** Litres per square foot

**Net Zero:** a building for which the amount of on-site renewable energy sources is equal to the amount of energy used by the building.

**PRI:** Principles for Responsible Investment. This organization works to understand the investment implications of environmental, social and governance factors and to support its international network of investor signatories in incorporating these factors into their investment and ownership decisions.

**Scope 1 emissions:** Direct greenhouse gas emissions from activities at company-owned properties, including combustion of natural gas in boilers and furnaces, the use of gasoline in generators and vehicles and refrigerant losses.

**Scope 2 emissions:** Greenhouse gas emissions from the generation of electricity, steam and chilled water purchased by the company.

**Scope 3 emissions:** Greenhouse gas emissions due to company operations from sources not owned or controlled by the company, e.g., landfill waste, water transportation and data centres.

**TCFD:** Task Force on Climate-related Financial Disclosures. A market-driven initiative, set up to develop a set of recommendations for voluntary and consistent climate-related financial risk disclosures in mainstream filings.

**Waste diversion rate:** The percentage of total waste that is diverted away from landfill disposal through recycling or composting.

**WELL™:** a performance-based building certification system for measuring and monitoring building features that impact human health and wellbeing, through air, water, nourishment, light, fitness, comfort, and mind.

**ENERGY STAR™:** An international standard for energy efficiency. It was created in 1992 by the U.S. Environmental Protection Agency and the Department of Energy to provide an energy performance rating system for commercial building types. The ratings, on a scale from 1 to 100, benchmark the energy efficiency of specific buildings against similar

# Important Information

## Legal information

Investing involves risks, including the potential loss of principal. Financial markets are volatile and can fluctuate significantly in response to company, industry, political, regulatory, market, or economic developments. These risks are magnified for investments made in emerging markets. Currency risk is the risk that fluctuations in exchange rates may adversely affect the value of a portfolio's investments.

The information provided does not take into account the suitability, investment objectives, financial situation, or particular needs of any specific person. You should consider the suitability of any type of investment for your circumstances and, if necessary, seek professional advice.

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Manulife Investment Management is the institutional asset management arm of Manulife, a global organization that operates in many different jurisdictions worldwide. Manulife Investment Management's diversified group of companies and affiliates provide comprehensive asset management solutions for institutional

investors, investment funds and individuals in key markets around the world. This investment expertise extends across a broad range of public and private asset classes, as well as asset allocation solutions. Manulife Investment Management has investment offices in the United States, Canada, the United Kingdom, Japan, Hong Kong, and throughout Asia.

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