

An aerial photograph of Vancouver, British Columbia, showing a dense urban skyline with numerous high-rise buildings. In the background, there are snow-capped mountains and a large body of water. The image is partially obscured by a large blue diagonal graphic element on the left side.

QUADREAL'S APPROACH TO THE TCFD RECOMMENDATIONS

2023



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Dennis Lopez
CEO, QuadReal
Property Group

MESSAGE FROM THE CEO

As a global real estate investment, operating and development company, we thrive by creating and managing healthy environments for our tenants, residents, and communities. Climate change presents clear risks and challenges across the real estate industry. We see near and long-term benefits to proactively reducing the carbon emissions related to the portfolios we manage, as well as to mitigate the physical climate risks of our investments.

Climate risks in real estate are not just felt when a storm hits or when a property is underwater. We expect the potential for market disruption once the industry builds consensus on heightened future costs due to storms, floods, and wildfires, leading to rapid increases in insurance premiums and declining asset valuations. Increasing carbon emission regulations requiring costly retrofit investments to maintain compliance and competitiveness in the market are other drivers.

For real estate, the science is clear on what is needed. In 2015, over 190 countries signed the Paris Agreement to recognize climate change as a serious threat to human survival and agreed to limit global greenhouse gas (GHG) emissions so that global temperatures are maintained to 1.5 - 2°C above pre-industrial levels. QuadReal acknowledges the role we have in contributing to climate change. We are committed to achieving the science-based carbon reduction goals in line with those set by the International Panel on Climate Change (IPCC).

QuadReal manages the British Columbia Investment Management Corporation's (BCI) real estate and mortgage programs on behalf of their 32 British Columbia public sector clients. BCI, one of the largest institutional investors in Canada, **has a twenty plus year history of climate action** which has included support for the creation of the Taskforce on Climate-Related Financial Disclosures (TCFD); and now includes annual disclosures aligned with the TCFD recommendations. We believe that transparent marketplaces perform better, and that climate-related information is increasingly material to financial decisions. Our TCFD report is updated annually and provides direct responses to each of the TCFD recommendations. It showcases our data-based decision processes that feed into clear management structures.

Across QuadReal, with leadership from all parts of the company, we have conducted robust analysis of all investments for physical climate risks, including divesting properties where the risks are too high. As a company, we have also stepped up our carbon reduction commitment, with a focus on tangible 2030 targets towards net zero by 2050. These are deeply collaborative efforts that involve our clients, colleagues, tenants, partners, and the community members where we operate. I am proud to be part of QuadReal's leadership on climate action, consistent with our commitment to **Being a Responsible Company**.

ALIGNING WITH THE TCFD

As a global real estate investment company, we understand the importance of a stable financial and environmental landscape. One of QuadReal's core responsibilities is to align with like-minded partners in the industry to promote the need for reliable and accurate disclosure.

The Financial Stability Board (FSB) established the Task Force on Climate-Related Financial Disclosures (TCFD) in 2015 to develop recommendations for more effective climate-related disclosures to promote more informed investment, credit, and insurance underwriting. TCFD-aligned disclosure supports market participants and other stakeholders to better understand the concentrations of carbon-related assets in the market and the broader financial system's exposure to climate-related risks.

While the FSB disbanded the TCFD in 2023, the framework continues to inform QuadReal's approach to climate risks and opportunities. QuadReal will be monitoring emerging best practices on climate-related disclosure, including the International Sustainability Standards Board's Sustainability Disclosure Standards (ISSB Standards) in 2024. The following sections show how QuadReal's practices align with the TCFD recommendations. This disclosure is consistent with how BCI presents its TCFD report.



Recommendation A

Describe the Board's oversight of climate-related risks and opportunities.

QUADREAL'S ALIGNMENT:

QuadReal's Board of Directors is responsible for the oversight of our sustainability and climate-related risks and opportunities impacting the business. Annually, a sustainability strategy and progress update are presented to the Board for their review. This includes a summary of physical climate risks across the portfolio, progress against our decarbonization targets, as well as climate transition risks and recommended approaches. The Board also approves QuadReal's strategic plan which includes activities related to carbon reduction and climate risk management.

Recommendation B

Describe Management's role in assessing and managing climate-related risks and opportunities.

QUADREAL'S ALIGNMENT:

QuadReal's Chief Executive Officer (CEO) has overall responsibility for climate-related risks and opportunities. Sustainability progress is part of the annual performance scorecard of the CEO and is further cascaded down within the organization. The CEO chairs the Management Investment Committee, which reviews all new investments and divestment decisions. Each review includes a memo outlining the climate risk exposure of the asset and any mitigating factors planned or implemented. See the [QuadReal's Process for Prioritizing Physical Risk](#) section for a full description of the physical climate risk assessment process.

The Sustainability Committee is chaired by the Managing Director of Global Portfolio Management and the Canadian President and includes people from key departments across the company. The Sustainability Committee provides guidance on strategy as well as monitoring progress. Climate-related risks and opportunities are core topics for the committee. Additional areas of focus have been energy efficiency and carbon reduction progress for our directly managed assets in Canada and the United States, as well as annual ESG reporting of our international investment partners.





STRATEGY

Recommendation A

Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.

QUADREAL'S ALIGNMENT:

QuadReal uses a physical risk modelling tool to analyze physical hazards under future climate scenarios. QuadReal previously leveraged physical hazard exposure data provided by Moody's ESG Solutions. We will be transitioning to a new provider with broader hazard and climate scenario coverage for this service in 2024. Moody's service provides data on risk exposure across a range of physical climate hazards under Representative Concentration Pathway (RCP) 4.5 and 8.5, which align with intermediate and high global warming scenarios, respectively. The hazard data covers both acute and chronic risks. QuadReal prioritizes flood, sea level rise, and wildfire, as these present the greatest potential for catastrophic damage and market-level impacts to our portfolios. See [QuadReal's Process for Prioritizing Physical Risk](#) below for a full description of the how the physical hazard data is utilized.

	Physical Risks & Opportunities	Transition Risks & Opportunities
Short-Term	<p>Fluvial Flood - Historically, riverine flooding has been one of the costliest climate perils for real assets¹. Flood events can directly impact real estate investments through property damage, tenant disruption, and clean-up costs. Properties can also experience indirect impacts such as insurance premium increases and reputational risks.</p> <p>Wildfire - Wildfires present significant damage potential to assets located in the wildland urban interface (WUI). While the impacts of wildfires are limited to specific regions, high exposure areas are becoming increasingly challenging to protect, which could lead to insurers withdrawing from local markets.</p>	<p>Regulation - Increasing regulation aimed at mitigating building-related emissions may result in non-compliance penalties for emissions-intensive properties. There is a potential for negative impacts on reputation as well.</p> <p>Green financing - Investing early in emissions reduction can provide assets with access to green financing opportunities at lower rates.</p> <p>Technological Obsolescence - Deploying nascent technologies in support of building decarbonization presents technological risks. Relatively new solutions such as cold climate heat pumps could disrupt existing system designs or be displaced by innovations in subsequent product models.</p>
Medium/Long-term	<p>Coastal Flooding and Sea Level Rise - Exacerbated coastal flooding from hurricanes and sea level rise under future climate scenarios could impact market stability and result in stranded assets. While there is limited evidence to suggest sea level rise risk is currently capitalized in real estate², it is reasonable that this risk will eventually be priced in.</p> <p>Heat Stress - Heat stress from higher mean temperatures and increasing heat island effects impacts regional livability, as well as accelerated HVAC system degradation and increased energy consumption. While a longer-term concern, heat stress could result in value impairment for non-resilient assets.</p> <p>Location Advantage - QuadReal's portfolio is concentrated in Canada (relative to its global share of Gross Domestic Product (GDP)), where physical climate risks to real estate are comparatively low.</p>	<p>Stranded assets - We may see reduced demand for emissions-intensive properties. Assets that are challenging to decarbonize may see a discount applied or become stranded in the long-term.</p> <p>Green premium - Pursuing green building certifications is valued by our tenants and residents. Literature on green premiums and the value of green certifications are well established, with a rent premium of 4-8% reported across asset classes and geographies. It is reasonable that a similar premium may emerge for low carbon assets.</p>

¹ Insurance Bureau of Canada. 2020. Facts of the Property and Casualty Insurance Industry in Canada

² Murfin, J. & Spiegel, M. Is the Risk of Sea Level Rise Capitalized in Residential Real Estate?, The Review of Financial Studies, Volume 33, Issue 3, March 2020, Pages 1217-1255

Recommendation B

Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.

QUADREAL'S ALIGNMENT:

As a global real estate company, our operations are exposed to both physical and transition risks and opportunities from climate change. Physical risks relate to the direct impacts of acute hazards, such as floods and wildfire, as well as chronic stressors, such as sea level rise. Transition risks are driven by systematic efforts to mitigate the worst physical impacts of climate change, such as emerging regulatory changes and tenant demands related to energy and emissions performance. We consider both physical and transitional risks when analyzing the potential impact of climate change on our business, strategy, and financial planning.

BCI developed an in-house framework that measures and monitors the potential implications of systemic ESG risks and opportunities, including climate change, across the portfolio. The framework analyzes climate change transition risk across all real estate and mortgages using scenario analysis and financial impact sensitivity testing. At QuadReal, we use the framework to understand the current exposure to systemic ESG risks and opportunities in the portfolio and monitor how this exposure changes over time.

QUADREAL'S PROCESS FOR PRIORITIZING PHYSICAL RISKS:

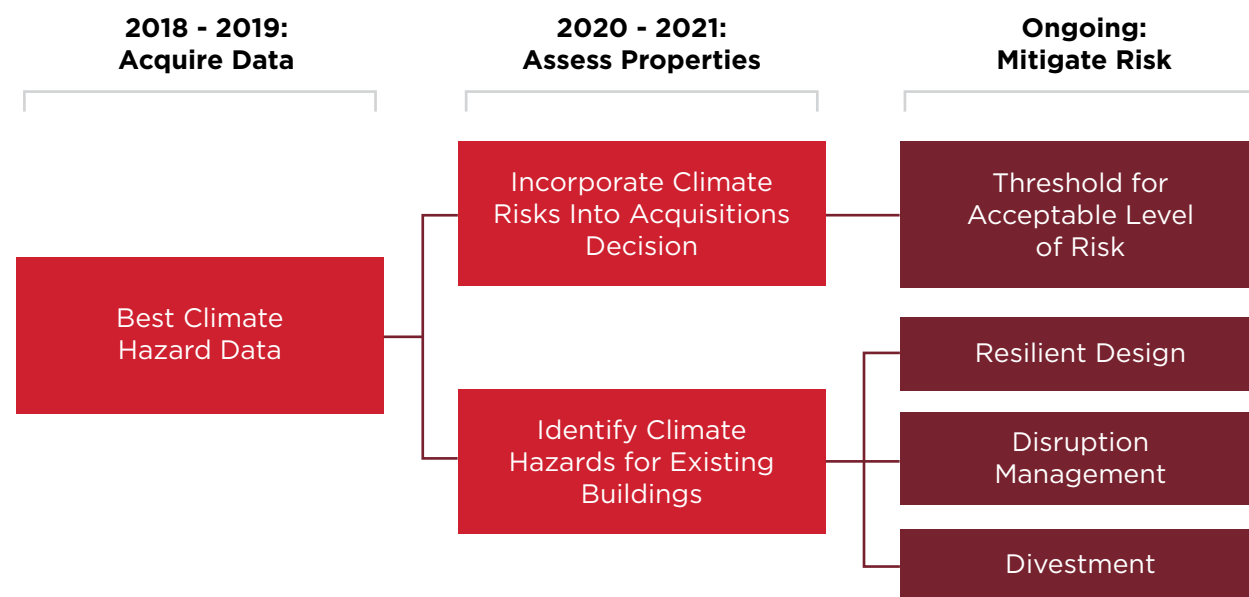
QuadReal's entire portfolio is assessed annually for physical risk exposure under RCP 4.5 and 8.5. Using Moody's ESG Solution's climate data, we evaluate all assets for exposure to a range of physical hazards. Assets that exceed our internal exposure thresholds for flood, sea level rise and/or wildfire risk are flagged for further assessment. High exposure assets are assessed for mitigating factors, such as building or regional resilience infrastructure and investments in operational readiness. Assets with a high level of exposure and limited mitigation are identified to portfolio management for accelerated disposition.

In 2023, QuadReal enhanced our physical risk screening process for investments in identified high risk markets. In addition to assessing and mitigating risk at the asset-level, we are actively incorporating physical risk considerations into our market research and selection process.

A similar climate risk assessment process is carried out during due diligence for all prospective acquisitions and new development projects. Investments are assessed for risk exposure and mitigating factors, with the ESG team providing one of three recommendations to Investment Committee based on their findings:

1. **Positive:** Sufficient mitigation in place to proceed with the acquisition as planned
2. **Conditional:** Approval pending implementation of adaptive measures and/or insurance availability/cost
3. **Negative:** Recommend against investment.

The Investment Committee makes the final decision on whether to proceed with the investment, considering climate risk amongst all other factors. **Figure 1** below illustrates our process:



QUADREAL'S PROCESS FOR PRIORITIZING TRANSITION RISKS:

QuadReal has developed a Sustainability Playbook and Checklist for new developments where the greatest weighting is on carbon reduction. The Checklist is incorporated into all Canadian developments and is being piloted with on our directly managed developments in the US. We also share the Playbook and Checklist with our international partners. The checklist enables a forecast of future emissions, as well as estimating transition risks from escalating carbon taxes and local carbon intensity regulations.

For directly managed standing assets, we track progress toward our carbon reduction target annually, ensuring our operational practices are aligned with the Paris Agreement. We developed a carbon reduction planning tool and processes to ensure the portfolio remains on pace for a 50% reduction in absolute emissions by 2030 compared to a 2007 baseline. The tool allows for asset level comparison to the Carbon Risk Real Estate Monitor (CRREM) pathways and local carbon regulations to evaluate stranded asset risk. From the asset-level, we can roll-up projected energy performance to understand how our portfolio emissions will change over time. These programs and targets are reviewed every three years in light of changes in policy and regulatory risks.

In 2023, QuadReal established a Net Zero Technology and Deployment Committee, with representation from Technical Services, Capital Planning, Digital Buildings, Sustainability, and Asset Management teams. The Committee assesses low-carbon technologies that are being considered for new developments and retrofit applications. The group's role is to ensure QuadReal is investing in proven, scalable technologies with high potential to support the portfolio's net zero transition, while mitigating the risk of technological obsolescence.



Recommendation C

Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

QUADREAL'S ALIGNMENT:

In alignment with the TCFD recommendations, QuadReal worked with our parent company, BCI, to assess these risks to our investment strategy under four different climate change scenarios. The scenarios developed internally by BCI are based on information from the International Energy Agency (IEA) and the Network for Greening the Financial System (NGFS). These scenarios provide insight into direct transition impacts to the energy system and overall economic damages to form an in-house GDP Damages scenario. This provides an estimate of net economic impacts to growth sensitive industries and direct impacts to the energy and utilities sectors.

1.5°C scenario: BCI's updated 1.5°C or net-zero aligned scenario assumes deep decarbonization across all industries and requires a rapid and extensive shift in many sectors of the economy. This scenario has the most pronounced short-term transition impacts, which are not expected to be orderly in all jurisdictions and industries. There are also significant opportunities for low-carbon energy infrastructure under this scenario, including renewable energy investments.

2°C scenario: The 2°C scenario reduces many of the significant long-term physical impacts from climate change and has the potential to provide substantial investment opportunity for low-carbon infrastructure. The direct impacts of transitioning the energy and utilities sectors will support broader decarbonization of the economy.

3°C scenario: This scenario creates a trajectory where immediate impacts to the energy system are less severe relative to the 2°C scenario, but transition impacts still materialize. Negative impacts result as we see transition risks occurring alongside increases in severity and frequency of physical risks.

4°C scenario: This scenario is the most negative over the long term as economic damages from climate change occur from direct physical damages and economic disruption across most asset types. As discussed under [QuadReal's Process for Prioritizing Physical Risk](#), we used Moody's physical risk modelling tool across the global portfolio to evaluate the location-specific physical hazard risk to each asset.



RISK MANAGEMENT

Recommendation A

Describe the organization's processes for identifying and assessing climate-related risks.

QUADREAL'S ALIGNMENT:

Physical risk identification and assessment:

Managing climate-related risks starts with ensuring that a detailed evaluation of the risks is incorporated into each investment decision. See [QuadReal's Process for Prioritizing Physical Risk](#) section for details on our physical climate risk assessment process.

Transition risk identification and assessment:

QuadReal's Sustainability Committee identifies emerging transition risks as part of an annual review of risks and opportunities. The review includes risks presented by new policies and regulations, such as energy disclosure requirements or changes in carbon pricing regimes. As with physical risk, limiting the addition of new high-risk assets to the portfolio is critical to managing transition risk. See [QuadReal's Process for Prioritizing Transition Risks](#) section for discussion on how we ensure the portfolio remains resilient under the transition to a low-carbon economy.

Recommendation B

Describe the organization's processes for managing climate-related risks.

QUADREAL'S ALIGNMENT:

In 2019, we initiated a multi-phased approach to managing the physical climate risks of our investments identified from Moody's physical risk modelling tool. Our first step was to implement a process for evaluating climate risks during acquisition due diligence. For our existing assets, we conduct an annual portfolio-level exposure analysis. These processes are outlined under [QuadReal's Process for Prioritizing Physical Risk](#). Our climate hazard data serves as a way for us to incorporate better climate resilient and long-term decisions into our acquisitions, as well as benchmark our current assets.

To improve portfolio resilience, we developed an in-house vulnerability and preparedness assessment for flood risk in 2021. We piloted the assessment in 2021 and rolled it out to all directly managed properties exposed to riverine and coastal flood risk in 2022.

Our ability to manage climate-related risks also requires us to engage and collaborate with our operating platforms and investment partners on their climate-related activities, including supporting their efforts to decarbonize the assets they manage. We work with our operating platforms and partners to assess how climate change can impact value and implement strategies to mitigate risks.

Recommendation C

Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.

QUADREAL'S ALIGNMENT:

QuadReal conducts several climate-related risk management strategies at the portfolio level. Our Enterprise Risk Management framework includes climate alongside concerns like cyber risks. As per other investment risks, it is part of the ongoing risk monitoring discussed at the senior management level and with QuadReal's clients. Macroeconomic climate-related risks and opportunities are also incorporated in our investment strategy.

All new investments receive a climate risk assessment, as discussed under [QuadReal's Process for Prioritizing Physical Risk](#). Climate risk is considered alongside all other investment risks and impacts in our Investment Committee's decision on any investment.



METRICS AND TARGETS

Recommendation A

Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.

QUADREAL'S ALIGNMENT:

QuadReal prepares an annual report for the Canadian portfolio aligned with the Sustainability Accounting Standards Board (SASB) Real Estate Industry Standard. The SASB framework allows us to make year-over-year comparisons of our energy and water consumption, GHG emissions, and climate change adaptation metrics. These metrics are used as a benchmark for our climate-related targets and sustainable initiatives.

The climate-related metrics QuadReal currently measures and monitors include:

- Energy consumption
- Water consumption
- % of the portfolio exposed to a 100-year floodplain
- Scope 1, 2, and 3 GHG emissions

In terms of physical risk exposure metrics, we have selected the following indicators from Moody's physical risk modelling tool based on known business impacts caused by changes in the physical environment:

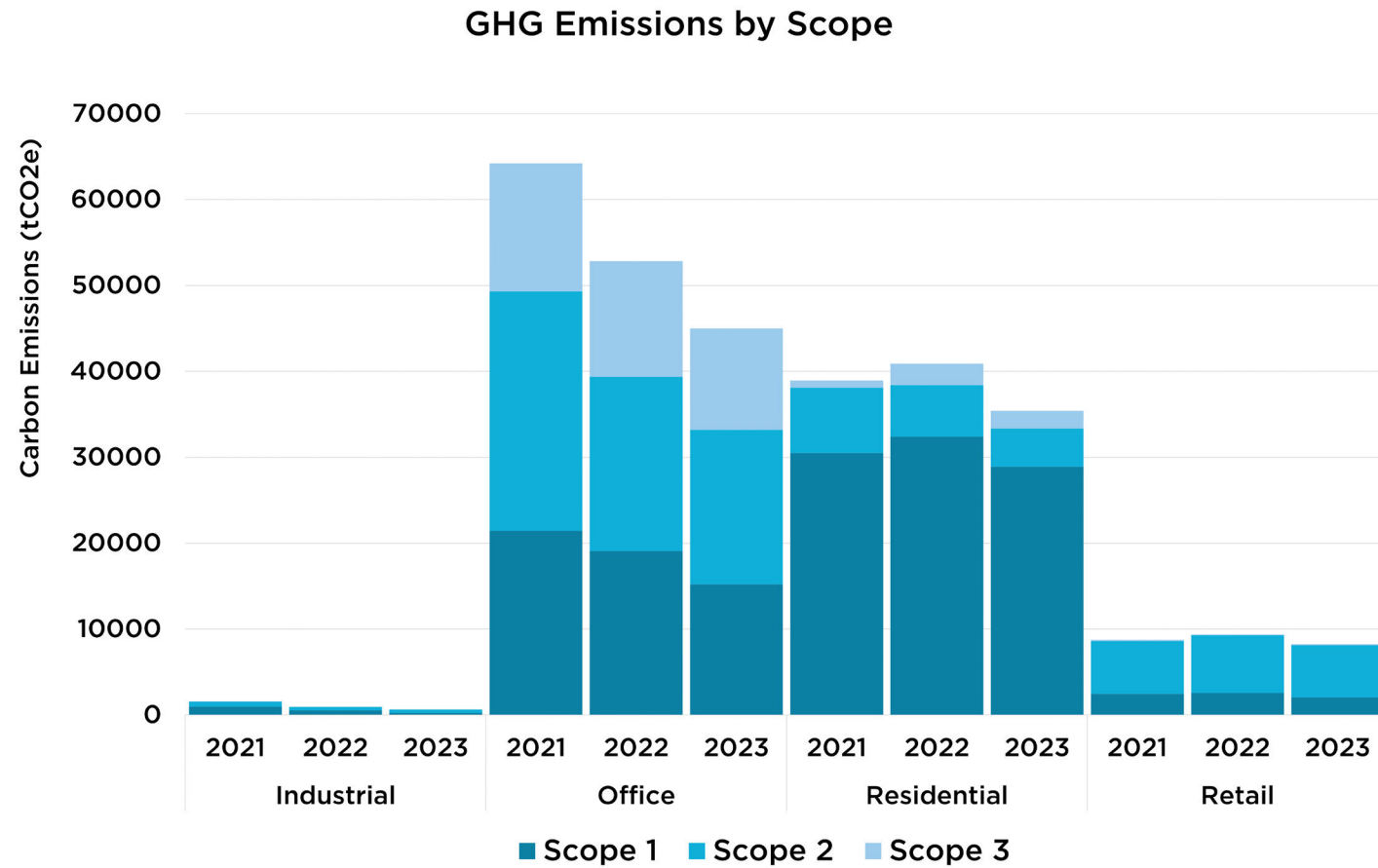
- Floods
- Heat Stress
- Hurricanes & Typhoons
- Sea Level Rise
- Water Stress
- Wildfires

A full list of our metrics can be found in our SASB report [available on our website.](#)



Recommendation B

Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks³.



Scope 1 emissions are direct emissions from owned or controlled sources. For QuadReal this includes natural gas.

Scope 2 emissions are indirect emissions from the generation of purchased energy. For QuadReal this includes common area electricity, cooling and heating fuels.

Scope 3 emissions are other indirect emissions that occur upstream and downstream in the value chain of the reporting company. For QuadReal this includes water, waste and tenant electricity.

Accounting Metric	Measurement	2021	2022	2023	SASB Code
Total location-based portfolio GHG emissions, by scope	Tonnes of CO ₂ equivalent (tCO ₂ e), Scope 1	55,422	54,617	46,415	N/A
	Tonnes of CO ₂ equivalent (tCO ₂ e), Scope 2	42,153	33,357	28,901	N/A
	Tonnes of CO ₂ equivalent (tCO ₂ e), Scope 3	15,901	16,056	13,970	N/A
Total location-based portfolio GHG emissions	Tonnes of CO ₂ equivalent (tCO ₂ e)	113,476	104,029	89,286	N/A
Total market-based portfolio GHG emissions, by scope	Tonnes of CO ₂ equivalent (tCO ₂ e), Scope 1	55,422	54,617	46,415	N/A
	Tonnes of CO ₂ equivalent (tCO ₂ e), Scope 2	10,273	10,901	17,941	N/A
	Tonnes of CO ₂ equivalent (tCO ₂ e), Scope 3	1,860	1,667	3,459	N/A
	Tonnes of CO ₂ equivalent (tCO ₂ e), Offsets purchased	(36,623)	(32,100)	(20,456)	N/A
Total market-based portfolio GHG emissions net of offsets	Tonnes of CO ₂ equivalent (tCO ₂ e)	30,933	35,086	47,359	N/A

QUADREAL'S ALIGNMENT:

QuadReal has chosen to voluntarily disclose our GHG emissions data including scope 1, 2 and 3 emissions, in accordance with the GHG Protocol, in addition to the SASB metrics.³

See our GHG emissions methodology on our [website](#).

³ While QuadReal's responses to the TCFD Recommendations apply to our global portfolio, the SASB Real Estate metrics and 2023 emissions reported are for our Canadian portfolio only. The reported portfolio excludes developments, mortgages and asset management-only properties.



Recommendation C

Describe the targets used by QuadReal to manage climate-related risks and opportunities and performance against targets.

QUADREAL'S ALIGNMENT:

QuadReal currently has the following targets related to our climate risk activities:

- For energy use under our control, we have averaged a 2% annual reduction in energy use over the past 10 years. To align with a 1.5-degree scenario, we are escalating our target pace to a 4% annual reduction.
- 50% absolute carbon reduction of directly managed portfolio by 2030.
- Net Zero for our office portfolio by 2040.
- Net Zero across our global portfolio by 2050, including all emissions from on-site uses and embodied carbon.
- Public disclosure of our green certifications which make up over 95% of our Canadian portfolio.
- Directly managed properties disclose performance on leasing pages. Metrics include green building certification levels, energy use intensity (EUI), and greenhouse gas intensity (GHGI).



UniLodge

**Any questions?
Reach out to sustainability@quadreal.com**

<https://www.quadreal.com/esg/our-esg-approach/>



QuadReal™