



# Investment Carbon Footprint Reduction Commitments at Canadian Universities: *Big Claims, Big Questions*

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## Executive Summary

At least a dozen Canadian universities have made commitments to reduce the carbon footprint of (some of) their investments. These commitments involve trying to lower the number generated by one or more metrics that measure the carbon emissions of the companies in which the university holds investments. Carbon footprint commitments are distinct from other kinds of climate finance commitments, like divestment from fossil fuels and engagement in ‘impact investing’, and some universities make two or more of these types of pledges.

Some Canadian universities have reported rapid progress in reducing the carbon footprints of (parts of) their investment portfolios, with a few claiming reductions of 70% or more.

Understanding what these claims mean, how carbon footprints are calculated, and what might be the potential limitations, drawbacks, and unanticipated consequences of carbon footprint targets is highly complicated. While some universities have shed light on important aspects of the carbon footprint framework in their communications, none has come close to explaining all the relevant issues or disclosing all the relevant information. University communications about these commitments are thus difficult to evaluate, and many would be difficult to understand for anyone who lacks a background in climate accounting.

This report draws on relevant literature and a review of responsible investment communications at 18 Canadian universities to develop a set of questions that should be asked of any university making an investment carbon footprint commitment. In this Executive Summary we present not the questions but some of our key findings and arguments about these pledges.

1. We did not find a single Canadian university that has committed to reduce the *actual* carbon emissions associated with its investments. Commitments rather are to reduce ‘normalized’ emissions expressed per million dollars invested or per million dollars of investee company sales. This choice of metrics means that a significant amount of claimed ‘carbon footprint’ reductions may come from irrelevant sources like rising share prices.
2. Some Canadian universities explicitly limit their commitments to the Scope 1 and Scope 2 emissions of companies in their portfolios while excluding Scope 3 (indirect, value chain) emissions. We did not find any university that unambiguously includes Scope 3 emissions. This means that claimed emissions reductions may partly result from moving investments away from firms with higher Scope 1 and 2 emissions and towards those with lower Scope 1 and 2 but high Scope 3 emissions – including, potentially, the big Canadian banks that provide massive amounts of financing for fossil fuel extraction.
3. Most universities limit their commitments further by applying them only to certain university investment funds and/or to certain classes of investment. Targets are created more frequently for endowment funds than for pension funds, and often commitments only apply to equities. Universities have, however, done little to disclose what percentage of their overall investments their commitments cover.

4. For all the above reasons, Canadian university statements about their carbon footprint reporting, targets, and achievements are frequently misleading and occasionally clearly incorrect.
5. Data disclosure is also very low at most reporting universities. Only a handful publish lists of the companies in which they have investments, and many do not report the absolute greenhouse gas emissions associated with their portfolios.
6. None of the universities reviewed did anything to explain why the base data used to calculate their carbon footprints – the reported emissions of the companies in which they invest – should be trusted, and none revealed whether their investee companies use widely-discredited ‘carbon offsets’ to reduce their reported emissions.

There are thus many reasons to suspect that these carbon footprint reduction pledges and actions make relatively minor contributions to substantive climate action. The Canadian universities that have made the commitments have done almost nothing to explain how investment carbon footprint reduction actually contributes to decarbonizing the economy. We call on them to make the logic behind their commitments plain – and to answer the long list of questions we develop in this report.

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## Introduction

In the space of just a few years, commitments to reduce the ‘carbon footprint’ of university investments and reported progress towards these goals have become an important part of some Canadian universities’ claims to be responding to the existential challenge climate change poses to humanity. Prominent institutions have claimed eye-catching progress towards meeting or exceeding their commitments. Laval, [having targeted](#) reductions in its equity portfolio carbon footprint of 30% by 2025 and 50% by 2030 (against a 2018 baseline), [reported](#) that as of October 2021 it had already achieved a 42% reduction. [McMaster’s goal](#) was a 45% reduction of ‘carbon in university investments’ by 2030, but by 2021 the figure was down over 50% and the university had adopted new reduction targets of 65% by 2025, 75% by 2030, and 100% as soon as possible after that. The University of Toronto met its [2020 pledge](#) to reduce the carbon footprint of its endowment and pension funds by 40% by 2030, almost a decade ahead of schedule. It immediately followed up with a new October 2021 pledge to cut the endowment fund’s footprint by an additional 50% (against a 2019 baseline) by 2030; as of the end of 2022, U of T was most of the way to that goal (UTAM 2022: 06). Simon Fraser in March 2022 claimed a 74% reduction in its investment portfolio’s carbon footprint, “29 per cent above target and well ahead of its 2025 deadline” (2022: 2). The University of Ottawa (2022: 18) reports that the carbon footprint of its long-term portfolios fell by 87% between 2014 and 2021. And the [University of Waterloo](#), having committed to “reducing the carbon footprint of its pension and endowment investment portfolios by 50 per cent by the year 2030”, reported that between 2018 and 2021 – just three years – the carbon footprint of the equity portfolio of its endowment fund fell by 55% and that of its pension plan by an astonishing 85%.

Our own Wilfrid Laurier University also claims rapid progress in this area. [Laurier’s commitment](#) is “to a 40% reduction in the carbon footprint (intensity) for equities held within the University Endowment Fund, to be achieved by the end of 2030 (based on levels as at December 31, 2019).” This commitment was approved by Laurier’s Board of Governors in June 2021 and [publicly announced](#) in November 2021. It appears, however, that Laurier had already achieved this goal by early 2021, before it had even decided to pursue it. Laurier’s [2022/23 Responsible Investment Report](#) indicates that the carbon intensity figure fell 38% in the single year from end-2019 to end-2020, and that by end-2022 the total drop was 62%.

These carbon footprint reduction commitments and claimed achievements have helped drive a significant change in debates over climate action and investment at some prominent Canadian universities. Where a decade ago activists calling for divestment from fossil fuels were likely to be met with resistance, stonewalling, and outright rejection, now many administrations are making confident statements about their progress towards decarbonizing their investments. Carbon footprint reduction is one among a variety of types of investment climate action commitment being adopted at Canadian universities (it is distinct, for instance, from fossil fuel divestment), but at some institutions it is the main way in which administrations are bringing climate considerations to their investment policy.

Understanding and evaluating carbon footprint reduction commitments and claims is thus essential to climate action on many Canadian university campuses. Carbon accounting is, however, a complex

field with its own jargon, and newcomers to carbon footprint reporting face an uphill battle to identify the meaning of, assumptions behind, and gaps in responsible investment documents. While some universities have done valuable work to explain and to point out some of the limitations and weaknesses of the concepts and frameworks they use (and we draw on these positive examples), none has been sufficiently clear and comprehensive. This report provides guidance through this difficult terrain. Its central goals are to provide background on and critical analysis of carbon footprint reporting frameworks and to develop a set of questions that should be asked about the carbon footprint reduction commitments and reporting of any university. Our questions will help students, faculty, staff, and concerned community members figure out:

- whether university commitments are fully and accessibly explained;
- whether the university has disclosed the data and methodology behind its carbon footprint calculations and whether the data and methods should be seen as credible;
- what the omissions and weaknesses of common carbon footprint metrics are – what kinds of GHG emissions they usually exclude, and their sometimes surprising implications (including, bizarrely, treating increases in the monetary value of investments as reductions in the investments’ carbon footprint);
- whether investment decarbonization commitments might have negative unintended consequences, including shifting investments towards companies with low Scope 1 and 2 but high Scope 3 emissions (we explain these terms below);
- whether the university has adequately justified its choices of metrics and approach and acknowledged their weaknesses;
- and, crucially, whether the university has provided a convincing case for the value of investment decarbonization as an approach to climate action—without such an explanation, none of the details of or weaknesses in university investment decarbonization approaches are really relevant.

Our central argument is that university claims should be treated with great caution. Investment decarbonization commitments and reporting approaches at Canadian universities have serious problems and need to be submitted to careful scrutiny.

The report is organized as follows. In the remainder of this introduction, we put investment carbon footprint reduction commitments into the context of the various kinds of climate and investment pledges being made by Canadian universities, and then explain how we have developed our analysis of investment decarbonization and the sources we have drawn on. The main body of the report presents our concerns about university investment carbon footprint commitments and reporting and presents the many questions that should be asked about them. We frequently use our own university as an example, and have posted a focused analysis of Laurier’s commitments and reporting on [our committee web site](#). Readers can refer to the Table of Contents to see our full list of questions.

## *Climate Change and Responsible Investment: Canadian University Commitments*

Canadian universities, like universities in many other countries, have in recent years made increasing commitments to consider environmental, social and governance (ESG) factors in their investment policies and practices (for an example see McGill University 2022: 9-11). The specific commitments they have made with respect to climate change can be divided into three main types; this report deals only with the second.

1. The best-known approach, and the one that has been pushed for most vigorously by activists on Canadian campuses (see Maina, Murray and McKenzie, 2020), is *divestment from fossil fuels*. Universities making these pledges commit to withdrawing all investment from fossil fuel companies. Divestment commitments specifically do not have implications for the university's investments in other types of companies. Divestment pledges of varying kinds (some limited to specific university investment funds) have been made by at least Carleton, Concordia, Guelph, Lakehead, Laval, Ottawa, SFU, UBC, Université de Montréal, UQAM, U of T and Waterloo. Some Canadian universities have made explicit decisions *not* to divest, though some of them changed their minds later.

Laurier's Board of Governors rejected a divestment option when deciding on its approach to climate and responsible investment in 2021. Laurier has, however, [created a new Fossil Fuel-Free Fund](#) (FFFF) to which donations to the university can be channeled (other universities including Carleton, Concordia, McGill and UBC have created similar funds). While Laurier's FFFF is not a divestment commitment, it does create a small endowment fund that is meant to exclude investments in fossil fuel firms.

2. The approach analyzed in this report is commitment to *reduce the carbon footprint* of all or some of a university's investments. While divestment applies only to fossil fuel companies (however defined), carbon footprint reduction commitments apply to all types of firms. The contrast between the two approaches is highlighted by the fact that some Canadian universities have adopted carbon footprint commitments *instead of* divesting (Foley 2020), though some have made both divestment and carbon footprint pledges.

There is, as we show below, substantial potential for confusion about what universities take 'carbon footprint' to mean. The term sometimes refers to a general family of approaches, and sometimes to specific calculation metrics/formulas; it is sometimes measured in 'absolute', actual GHG emission terms, and sometimes normalizes or expresses the 'intensity' of emissions by dividing them by some other number (like the dollar value of a portfolio); and it usually includes only certain types of GHG emissions while excluding others. Universities also limit their carbon footprint commitments by making them only for certain investment funds and/or for certain types of investment.

When we use 'investment carbon footprint' in a general way in this report, the term refers to approaches that calculate the university's share of the carbon emissions of all the companies in which it has investments in the funds and of the kinds for which it has made commitments (we unpack this rather dense sentence below). Similarly, we use 'investment decarbonization' to mean commitments to reduce investments' carbon footprints. The way institutions use

these terms is not always consistent, so we frequently zero in on distinct uses of the terms as we encounter them.

3. The other main type of climate-related investment strategy involves *directing investment specifically to 'green' or sustainability-oriented companies*. Such investments aim not just at avoiding something negative (fossil fuels, GHG emissions) but at making positive contributions to climate action. McGill, for instance, pursues 'impact investments' that 'are made with the joint objective of generating positive, measurable social and environmental impact alongside a financial return' (2022: 9). Concordia, McMaster, Ottawa, SFU and UBC are among other universities pursuing this approach.

It is crucial to understand that all three types of commitment apply only to universities' investments. They are distinct from the commitments many Canadian universities have made to reduce greenhouse gas emissions from their own operations, including heating, electricity, paper consumption, university-related travel, and so on. We do not discuss those other commitments in this report.

### *Background, Sources, and Approach*

We on the WLUGA Climate Action Committee are not experts on climate finance and accounting (though we do know a lot about climate change). This report originated in our efforts to understand and respond to Laurier's responsible investment commitments and to compare them with commitments at other Canadian universities. We hope that our lack of expertise is a feature, not a bug, of our analysis. Because we have had to think through Laurier's commitments without prior grounding in the field, we have had to work carefully to figure out the meaning and implications of terms and conventions an expert might take for granted. We have thus aimed to put together an analysis that is welcoming to newcomers to this area – we were newcomers ourselves very recently. We also see this report as a living document. There may well be errors and omissions in our analysis, and we welcome comments, suggestions, updates, corrections, and critiques.

We have had to do a great deal of work to get to the point where we could write this analysis, and we have written it in the hopes of sparing others some of that labour. One of our core messages is that universities should be doing this educational and analytical work themselves. As commentators on carbon financial reporting have forcefully argued (CCSI 2023: 4, 9, 12-19; TCFD 2021: 8, 12-13, 35; University of Waterloo 2021: 6), it is imperative that organizations present their climate investment commitments and reporting in a clear, comprehensive, and accessible way and that they acknowledge the limitations of the approaches they have chosen. Some Canadian universities, including McMaster, Toronto, and Waterloo, do provide useful explanations of key aspects of what they're doing. Others do much less, however, and we did not find any that come close to answering all the questions we ask here. The lack of information may be partly a function of space limitations in reports. Universities may also be taking jargon and calculation processes for granted, perhaps assuming that because they're following 'industry practice' or consultant methodology they don't really have to explain themselves. We want to challenge this – to call on universities to present and, crucially, to justify what they're doing in a way that allows non-experts to evaluate the claims being made.



This report is unavoidably long. Calculating the carbon footprint of an investment portfolio is not like counting the number of marbles in a jar. It is a complex and multifaceted process that involves contested science; many debatable definitions; enormous amounts of potentially flawed data; decisions about inclusions, exclusions, and what to do when necessary data is missing; and lots of opportunities for error. The work of assembling simple, confident, singular numbers to represent ambiguous and in some ways unknowable realities has long been studied in Anthropology and in Science and Technology Studies (see Lippert, 2018). In our opinion, the goal of analyzing university investment carbon footprint reporting is not to find the “true” or “right” number (there is no such thing). It is rather to work out *how* the university has calculated the number and what the implications of the approach are: whether the data and methodology used are reasonably credible, whether they exclude things that shouldn’t be excluded, whether the chosen approach might have negative unintended consequences, and whether things can be done better.

We have drawn on two main kinds of sources in learning about climate finance commitments and Canadian university approaches to them. The first includes academic analyses and documents by groups like the Financial Services Board’s Task Force on Climate Finance Disclosure (TCFD) that explain reporting frameworks. Our critical analysis is informed especially by a report from the Columbia Center on Sustainable Investing that explains how existing climate finance frameworks and tools “often overstate or misrepresent the extent to which they support meaningful action toward achieving climate goals, and at times rely on misaligned targets or metrics that undermine their effectiveness as tools for setting or assessing corporate commitments” (2023: 4). We also found several valuable sources that compare the climate finance commitments of Canadian universities (Foley 2020; University of Waterloo, 2021: 26–30; Jackson, Kumar and Asghar, 2022; Ramani *et al.*, 2023), but none of them provides the focused discussion of *how* carbon footprints are defined and calculated that we present here.

Second, we reviewed the climate finance commitments and reporting of 18 universities.<sup>2</sup> We covered most of the institutions that have signed the [Climate Charter for Canadian Universities](#), which includes a commitment to “Regularly measure the carbon intensity of our investment portfolios, and set meaningful targets for their reduction over time.” Our goal in doing the review was not to be able to make systematic claims about how Canadian universities approach this topic (along the lines of “X% of Canadian universities have done Y”) but rather to get a sense of the range of approaches and to identify what we see as positive examples for particular topics. When we say that universities A and B have done something, we do not thereby imply that other universities haven’t done it. The research was mostly carried out in summer 2023, and the state of play at some universities may have changed since then. We hope that university staff responsible for communications and reporting regarding climate investment commitments will find our examples helpful. It should also be borne in mind that we did not review the climate finance commitments (or

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<sup>2</sup> Carleton, Concordia, Dalhousie, Guelph, Lakehead, Laval, Manitoba, McGill, McMaster, Ottawa, Queen’s, Saskatchewan, Simon Fraser, Toronto, UBC, Waterloo, Western, and Wilfrid Laurier.

lack thereof) of most Canadian universities and thus do not know how common the divestment, carbon footprint reduction, and impact investing strategies are. When citing university documents, we use embedded URLs for webpages and in-text citations for longer reports and PDFs. Most of the review was carried out by our research assistant Elaine Du under Derek Hall's supervision. We are grateful to Elaine for her excellent work.

A final introductory note: we are agnostic about the impact of fossil fuels divestment and investment decarbonization commitments on the actual decarbonization of the global economy; that is, we are not sure how useful these moves are relative to other types of climate action. The principle behind this report is that since universities are making investment carbon footprint commitments and emphasizing them in their sustainability communication and marketing, it should be possible to assess the meaningfulness of the commitments and the credibility of claims of progress. We also, however, return to wider debates about the impact of investment decarbonization in our final question.

## Many, Many Questions for Canadian Universities about their Investment Carbon Footprint Commitments

Twelve of the 18 universities we reviewed have made investment carbon footprint commitments: Guelph, Laurier, Laval, McGill, McMaster, Ottawa, Queen's, Simon Fraser (SFU), Toronto, UBC, Waterloo, and Western.<sup>3</sup> Carleton (2022: 4-5), Concordia (n.d.: 7), and [Manitoba](#) have said that they plan to report investment carbon footprint numbers in the future, and [Dalhousie](#) already monitors but does not report its numbers.

Our questions for Canadian universities with investment carbon footprint commitments are divided into four categories: 1) background; 2) what the universities' commitments are, what they mean, and what they include and exclude; 3) what data and frameworks universities use to calculate their investment carbon footprints, and what information they disclose about the process; and 4) the big question: why are universities making these commitments? Sub-categories are signaled by a total of 14 core questions that structure our inquiry. In some cases we also ask follow-up questions that sharpen our focus or that emerge from the analysis devoted to the initial question. All of the questions are laid out in the report's Table of Contents.

### 1. Background

#### *1.1 Who does the university's investing?*

At many Canadian universities, endowment, pension, and other investment funds are not managed directly by the university but instead by investment managers that the university hires. This means that decisions about the actual companies and instruments the university's funds are invested in are

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<sup>3</sup> The [University of Ottawa claims](#) that in 2015 it became the first Canadian university to commit to publicly disclosing the carbon footprint of its investment portfolio.

not made by the university, and university efforts to reduce the carbon footprint of investments will presumably be made through changing managers and/or asking managers to change their investment approach.

## 2. What are the commitments, what do they mean, what do they include and exclude?

### 2.1 What metric(s) do universities report and target, and what do they mean?

There is substantial room for confusion about the meaning of the metrics Canadian universities report and target. One key issue is that several different metrics (formulas for calculating carbon footprint numbers) are in play, and a second is that the same formula/metric can be referred to by different names. In this section we provide guidance towards figuring out what a university's chosen metric and terminology mean. The crucial point we develop is that *we have not found a single Canadian university investment decarbonization commitment that requires the university to lower the actual greenhouse gas emissions associated with its investments.*

Many (though not all) Canadian university investment decarbonization commitments target what they call the 'carbon footprint' of their investments. Standard definitions of 'carbon footprint' in the climate change literature refer to *actual*, or absolute, GHG emissions. The first line of [the Wikipedia entry on 'carbon footprint'](#) reads "The **carbon footprint** (or **greenhouse gas footprint**) serves as an indicator to compare the total amount of greenhouse gases emitted from an activity, product, company or country", and the entry goes on to say that carbon footprints are usually expressed in terms of carbon dioxide equivalent (CO<sub>2</sub>e) or, sometimes, of carbon dioxide emissions. This understanding of "carbon footprint" also appears in [a Task Force on Climate-Related Financial Disclosures \(TCFD\) glossary](#): "**CARBON FOOTPRINTING** refers to the calculation of the total greenhouse gas emissions caused by an individual, event, organization, service, or product expressed as a carbon dioxide equivalent."<sup>4</sup>

If "carbon footprint" is understood in this standard way as referring to actual GHG emissions, then the carbon footprint of a university's investments can be represented as the university's share of the carbon emissions of all of the companies in which it has investments. As the University of Toronto Asset Management Corporation puts it (2018: 03), "The carbon footprint attributable to an investment portfolio measures the proportionate emissions associated with companies held by that portfolio."

Things, however, are not so simple either for the TCFD or for Canadian universities. In [another document on "common carbon footprinting and exposure metrics"](#), the TCFD provides a conflicting

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<sup>4</sup> According to [Eurostat](#), 'carbon dioxide equivalent [...] is a metric measure used to compare the emissions from various greenhouse gases on the basis of their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.'

definition of “carbon footprint” to the one cited above: “Total carbon emissions for a portfolio *normalized by the market value of the portfolio, expressed in tons CO<sub>2</sub>e / \$M [millions of dollars] invested*” (our italics). In the same document, “The absolute greenhouse gas emissions associated with a portfolio, expressed in tons CO<sub>2</sub>e” are called not the “carbon footprint” (as they are in the Glossary) but “total carbon emissions”.

The same terminological conflict is visible in responsible investment documents from the University of Toronto and Simon Fraser. UTAM’s first carbon footprint report (from July 2018) states clearly that “A carbon footprint represents the greenhouse gas (GHG) emissions associated with the activities of an entity or individual” (2018: 03). Three of the four “carbon footprint metrics” the report presents in an appendix on “Calculating Carbon Footprints” (p.11), however, are not absolute but *normalized or intensity* measures (see also pp. 04, 08-09) – that is, they treat absolute emissions as a numerator and divide them by a denominator. The four metrics, and the questions the appendix says they answer, are:

1. total carbon emissions (tCO<sub>2</sub>e): “What is my portfolio’s *total* carbon footprint?”
2. carbon emissions (tCO<sub>2</sub>e per USD million invested): “What is my portfolio’s *normalized* carbon footprint per million dollars invested?”
3. carbon intensity (tCO<sub>2</sub>e per USD million sales): “How *efficient* is my portfolio in terms of carbon emissions per unit of sales?”
4. weighted average carbon intensity (WACI) (tCO<sub>2</sub>e per USD million sales): “What is my portfolio’s *exposure* to carbon-intensive companies?”

In its more recent reporting, U of T calls the straight tCO<sub>2</sub>e figure “absolute emissions” and defines “carbon footprint” as tCO<sub>2</sub>e/\$M invested (UTAM 2022, p.06). It is this tCO<sub>2</sub>e/\$M invested metric to which U of T’s carbon footprint commitments apply.

Similarly, in its Investment Portfolio Carbon Footprint Document Simon Fraser University defines “carbon footprinting” as “calculation of the *total* greenhouse gas emissions caused by an individual, event, organization, service, or product *expressed as a carbon dioxide equivalent*”; on the same page (2022: 6), however, it says that it “measures its carbon footprint in line with TCFD recommendations: Total carbon emissions for a portfolio *normalized by the portfolio’s market value, expressed in tons CO<sub>2</sub>e/\$M invested*” (our italics). UBC makes the same switch: it writes that “The total carbon emissions of an investment portfolio are calculated as the sum total of the carbon dioxide equivalent emissions of each company we are invested in, proportionate to our investment of that company”, but reports “total carbon emissions” as tCO<sub>2</sub>/ \$M invested (UBC IMANT 2022: 4). (UBC is unusual in giving its GHG emissions figures in tCO<sub>2</sub>, not tCO<sub>2</sub>e.)

Our review found many other examples of Canadian universities targeting a normalized or intensity understanding of “carbon footprint”, and no clear examples of universities setting an absolute target. [Guelph](#) (2022: 6), [Laval](#), McGill (2022:7) and [Waterloo](#) all track and target their ‘carbon footprint’ as tCO<sub>2</sub>e/\$M invested. Queen’s targets the same formula, but refers to it as both “carbon footprint” and “normalized carbon footprint” (2023: 14, 16). McMaster (2020-2021: 30-32) and Western (RIAR 2022: 15), target WACI (the fourth UTAM metric listed above). Some universities

report more than one metric. Guelph, UBC and Waterloo report tCO<sub>2</sub>e (or for UBC tCO<sub>2</sub>)/\$M and WACI, though they target only the former; Western tracks both but targets WACI.

Inconsistency over and/or misrepresentation of the targeted metric is especially notable at some universities. The [November 2021 press release](#) announcing Laurier's commitment to reduce the Endowment Fund's "carbon footprint" stated that "In June 2021, Laurier's Board of Governors approved a strategy to reduce the greenhouse gas emissions associated with the university's endowment fund by 40 per cent by 2030." This implies an absolute reduction. The commitment, as stated in Laurier's [2021/22](#) and [2022/23 Responsible Investment Reports](#), however, targets a reduction in "carbon footprint (intensity)", meaning a normalized metric. The 2022/23 report defines "carbon intensity" as "Tons CO<sub>2</sub> equivalent (scope 1 and 2) divided by \$ millions CAD invested", which seems clear enough. The Report also, however, provides two charts showing the Endowment Fund's "carbon intensity" for 2019 through 2022, one of which measures carbon intensity in tCO<sub>2</sub>e (an absolute measure) while the other, otherwise apparently identical, measures it in "tCO<sub>2</sub>e/revenue" (revenue of what is not specified). The same Laurier report, that is, seems to define or measure "carbon intensity" in three different and apparently incompatible ways, one of which is not an intensity measure at all.

Confusion about absolute vs. normalized metrics also has significant consequences in [UBC Investment Management's 2020 UBC Endowment Carbon Footprint Report](#). The report claims that UBC's "emission targets are not limited to an absolute reduction in carbon emissions" (p.4), but it in fact gives no indication that UBC *has* an absolute reduction target; its reported and target numbers are presented only as tCO<sub>2</sub>/\$M invested (see further below).

Taking a step back from this complex landscape of varied and sometimes conflated definitions, our review suggests that if a Canadian university has an investment decarbonization commitment, it targets normalized not actual GHG emissions. *We have not found a single unambiguous example of a university that has committed to reducing the actual greenhouse gas emissions associated with its investments.*

## *2.2. What are the implications of the university's choice of metric(s), and how does the university justify its choice?*

The implications of these choices of metric are alarming. While it can be valuable to understand emission reductions relative to the overall size of an investment portfolio, normalized calculations of emissions open the possibility for misleading claims about decarbonization achievements. The common tCO<sub>2</sub>e/\$M invested definition means that simple increases in investment values will reduce a portfolio's "carbon footprint" in the absence of any change in actual carbon emissions. A simple rise in stock market values, for instance, will mean that an equity portfolio is worth more and thus reduce its "carbon footprint" (a drop in the stock market would have the opposite effect) (CCSI

2023: 15). Indeed, a portfolio's normalized carbon footprint could easily fall while the actual GHG emissions associated with the portfolio are *rising*.<sup>5</sup>

The potential consequences of failure to grasp this point come through in the 2020 UBC IMANT report cited above. It states that UBC's 2030 emissions "goal aims to reduce portfolio CO<sub>2</sub> emissions to below 128 t CO<sub>2</sub>/m invested, which translates to a reduction of nearly 165-thousand tonnes of CO<sub>2</sub> emitted per year. For context, this is equivalent to removing over 35,000 cars from our roads." The first sentence, however, changes metrics in mid-stream. A given reduction in the portfolio's normalized, tCO<sub>2</sub>/\$M emissions does not imply any specific reduction in tCO<sub>2</sub>e emitted – again, if the denominator grows sufficiently, the portfolio's actual emissions could rise. The 165,000 tonnes and 35,000 cars statements are misleading and suggest that UBC IMANT does not understand the metrics it is reporting.

These drawbacks of normalized or intensity emissions measures, and the importance of targeting absolute emissions, were recently highlighted by the CCSI. We quote (p.16):

Targets and strategies based on emissions intensity are even more poorly correlated with actual GHG emissions than those based on absolute emissions. [...] Decarbonizing the real economy requires replacing high-carbon energies with low-carbon solutions, in other words, reducing absolute emissions. Absolute emissions targets should be given primacy over intensity targets, restricting intensity targets for comparison purposes or as a measure of increased efficiency alongside the reduction in absolute emissions. In June 2022, [the United Nations'] Race to Zero moved to invert the traditional prioritization of intensity metrics in its Interpretation Guide so that absolute emissions-reduction targets are now required and intensity-based metrics are considered appropriate additions in specific cases.

We have seen little evidence of Canadian universities acknowledging the major drawbacks in their metric of choice. The UTAM appendix discussed above gives useful lists of strengths and weaknesses for each of the four metrics listed. It is to UTAM's credit, too, that it acknowledged in its 2021 Responsible Investing Report (p.17) that the much greater reduction between 2019 and 2021 in the LTCAP Sub-Portfolio's tCO<sub>2</sub>e/\$M (-29.8%) than in its tCO<sub>2</sub>e (-8.5%) was

driven by the denominator effect in the footprint calculation; the dollar value of investments in the LTCAP Sub-Portfolio increased considerably over this period, driven primarily by the strong performance of equity markets between December 31, 2019, and December 31, 2021. This difference highlights how sensitive the

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<sup>5</sup> Academic research has also shown that inflation and exchange rate fluctuations can reduce other relative (rather than absolute) measures of investment carbon intensity. Janssen *et al.* (2022) explain the mechanisms with respect to Weighted Average Carbon Intensity (WACI), and show that for Dutch pension funds between 2012 and 2019, "approximately one-third of the observed 'greening' in the unadjusted WACI is 'non-real'."

carbon footprint (calculated in tCO<sub>2</sub>e/\$M) is to the market value of the LTCAP Sub-Portfolio.

Having made this essential point, however, the UTAM does not go on to explain *why* it has chosen this highly “sensitive” – or, better, problematic and misleading – target for the portfolio’s “carbon footprint”. Indeed, we have seen no convincing justification for this choice from any Canadian university. Waterloo’s Responsible Investing Advisory Group devoted substantial space to the pluses and minuses of different metrics (2021: 36-37) and recommended that several be tracked. In discussing ‘total carbon emissions’ the Group’s report writes that “The greatest virtue of this metric is that it is designed to track the construct that is most consistent with the overall goal, which is to reduce the total GHG emissions in the economy.” It then, however, claims that the possibility of rises in the total value of the portfolio means that the target should be adjusted to take investment values into account. The report provides no actual argument to back up this assertion, writing only that if portfolio values rise “then presumably any targeted reduction against this [absolute] metric will need to be modified.” While the Group acknowledges the denominator problem in normalized metrics, it commends the tCO<sub>2</sub>e/\$M invested, ‘carbon footprint’ metric as being “simple to understand and commonly used, thereby facilitating benchmarking with peer organizations.” While Waterloo does report absolute emissions (and WACI), it targets only tCO<sub>2</sub>e/\$M invested.

Simon Fraser’s Investment Portfolio Carbon Footprint Document (p.6) also makes an effort to explain the university’s choice of metrics, stating that the university uses “a normalized portfolio value measure, as it leads to a more intuitive and standardized measurement, making it easier to compare the carbon footprint across the portfolio as well as for benchmarking purposes” (compare McGill 2022: 7). Simon Fraser goes on to note that it has followed TCFD recommendations in using this measure (McMaster justifies its use of WACI in the same way; 2020-21: 32). These points hardly seem adequate to overcome the basic flaws of this metric.

If a university uses a normalized metric, then, two key follow-up questions to ask it are:

1. Has it disclosed that it has not in fact committed to reducing the actual emissions associated with its investments?
2. Why, at a time of climate emergency, has the university framed its decarbonization commitments in a way that makes it possible for it to claim that its investments’ “carbon footprint” is falling while the actual greenhouse gas emissions associated with them may be static or even rising?

### *2.3 What sources of greenhouse gas emissions has the university committed to reducing, how are exclusions justified, and what are the implications of the choice?*

The definitions of “carbon footprint” metrics presented above, with their many references to “total carbon emissions”, might make it seem as though Canadian universities’ investment decarbonization commitments apply to all the emissions associated with their investments. This is rarely if ever the case. Many of the commitments we reviewed are explicitly limited to Scope 1 and

Scope 2 emissions and exclude Scope 3. These widely-used categories derive from [the Greenhouse Gas Protocol emissions standards](#) and [are defined as follows](#):

- **Scope 1:**  
Direct GHG emissions that occur from sources owned or controlled by the reporting company – i.e., emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.
- **Scope 2:**  
Indirect GHG emissions from the generation of purchased or acquired electricity, steam, heating, or cooling consumed by the reporting company. Scope 2 emissions physically occur at the facility where the electricity, steam, heating, or cooling is generated.
- **Scope 3:**  
All other indirect GHG emissions (not included in Scope 2) that occur in the value chain of the reporting company. Scope 3 can be broken down into upstream emissions that occur in the supply chain (for example, from production or extraction of purchased materials) and downstream emissions that occur as a consequence of using the organization’s products or services.

To give an example of how tricky these categories can be, oil burned in the motor of a car in a university’s own fleet would be a Scope 1 emissions source, while oil burned by a taxi hired by a faculty member on a research trip would be Scope 3.

Reasonably accurate data for Scope 3 emissions can be difficult or impossible for an organization to compile, and far fewer companies report Scope 3 than Scope 1 and 2 emissions. It is thus common generally, and at Canadian universities specifically, for carbon footprint reporting and commitments to exclude Scope 3 emissions (or to include only certain sub-categories of Scope 3 like emissions from paper consumption or business travel). Simon Fraser (2022: 6), McMaster (2021a: 31), University of Toronto (2021: 13, 16) and McGill (2021: 7) have justified restricting their investment decarbonization commitments to Scope 1 and Scope 2 emissions on the grounds that Scope 3 data for companies is, as Simon Fraser puts it, “generally unavailable and unreliable at this point”. [Waterloo](#), Guelph (2022: 6), [Laurier](#), and Queen’s (2023: 12) also limit their commitments to Scope 1 and 2. Other universities do not seem to say which scopes they include. The only university we found which gives some indication that it includes Scope 3 emissions in its investment carbon footprint calculations is UBC (p.3), but its statement in this regard is ambiguous and we are unsure whether and how UBC uses Scope 3 in its footprinting calculations (UBC Investment Management 2022 does not mention scopes).

Universities should not, of course, be expected to make commitments regarding emissions for which reliable data is scarce or unavailable, and in excluding Scope 3 emissions from their calculations Canadian universities are following widespread practice in the corporate and financial sectors. We think, however, that this exclusion casts serious doubt on the value of the entire investment carbon footprinting exercise. We have not found anything in the commitments reviewed that would prevent universities from ‘reducing their carbon footprint’ or ‘decarbonizing’ their investment by



reallocating their investments from firms with high Scope 1 and 2 emissions to firms with low Scope 1 and 2 but high Scope 3 ones.

Two illuminating sets of data give a sense of the potential for this to happen. First, the TCFD's 2021 report *Guidance on Metrics, Targets, and Transition Plans* gives statistics on the extent to which GHG emissions in different sectors of the economy come from Scope 1, Scope 2 and 3 Upstream, and Scope 3 Downstream emissions. The figures are startling. Scope 3 downstream emissions alone account for the entirety of the reported emissions of the banking and insurance sectors and for the vast majority (80% or more) for real estate, energy (!), capital goods, and automobiles and components (!). For many sectors, too, the combination of Scope 2 and 3 upstream emissions (some unknown amount of which would be captured by Scope 2 reporting) and Scope 3 downstream emissions makes up virtually all emissions.

Second, the *Banking on Climate Chaos: Fossil Fuel Finance Report 2023* shows that Canadian banks are among the world's biggest funders of fossil fuel companies (2023: 10-11). Over the 2016-2022 period, RBC placed fifth in the global league table with an astonishing \$254 billion of fossil fuel funding; Scotiabank was 9<sup>th</sup>, TD 10<sup>th</sup>, and Bank of Montreal 15<sup>th</sup>. In 2022, RBC provided more fossil fuel finance than any other financial institution. Under the GHG protocol, these "financed emissions" are Scope 3 (Category 15). Given the negligible Scope 1 and 2 emissions of banks and the prominence of Canada's biggest banks in the country's economy, it is easy to imagine that the Scope 1 and 2 "investment decarbonization" commitments of Canadian universities are leading them indirectly to channel money to fossil fuel companies by reallocating investment to banks. Indeed, the welcome information UTAM provides on the sectoral breakdown of the market allocation and carbon footprint of its LTCAP Sub-Portfolio shows that between 2021 and 2022 the market allocation for Financials rose from 12.9% to 15.5% (2021: 18, 2022: 07).

The value of targeting Scope 1 & 2 and omitting Scope 3 emissions is further undermined by the way that corporate reorganization can turn a company's Scope 1 and 2 emissions into Scope 3 ones without doing anything to reduce actual emissions. This problem was vividly expressed by a sustainability reporting professional interviewed by Di Marco et al. (2022: 16):

But you know, if I'm a company and I go and outsource part of my production, then all of my scope 1 and 2 is gone. I can do that tomorrow, outsource, and then put all our hundred factories in someone else's hand and let them operate it. Whoops. You know, no scope 1 or 2. We're done. Everything is scope 3.

These issues suggest two essential follow-up questions:

1. What assurances can universities making carbon footprint reduction commitments provide that they are not simply reallocating their investments to firms with low Scope 1 and 2 but high Scope 3 emissions?
2. If they can't provide any, why are they making investment decarbonization commitments at all?

#### 2.4 To what university investments does the commitment apply, with what implications, justified how?

Universities that commit to reducing the carbon footprint of their investments do not necessarily make the commitment for *all* their investments. Most limit the scope of their commitments by applying them only to some of their pools of funds and/or certain types of financial instrument.

Laurier limits its commitments in both ways, with dramatic consequences. First, Laurier's commitment to reduce its investment carbon footprint by 40% by 2030 applies only to the Endowment Fund. As of 31 December 2022, Endowment Fund assets made up about 10.4% of the total value of the investments reported on in the Responsible Investment Reports. University policy states [that](#) 'total equity' should make up 47% of the Endowment Fund's investment allocation (the other asset classes targeted are bonds, mortgages, and real assets), and [Appendix B of Laurier's 2022-23 Responsible Investment Report](#) shows that between 2019 and 2022 the actual share fluctuated between 45% and 51%. Putting these two restrictions together, Laurier's decarbonization commitment covers roughly 5% of the investments listed in the Reports, and thus should be expected to have little impact on Laurier's overall investment behaviour. (See our [blog posts on Laurier's investment carbon footprint reduction commitments](#) for more information.)

Other Canadian universities have taken broader approaches in one or both regards (though some university commitments are not clear about this issue). [Waterloo's reduction commitments](#) apply to "the Endowment and Pension Funds' investments"; the university began measuring the carbon footprint and WACI of its equities in 2021 and committed to start measuring fixed income and real assets in 2023. McGill's commitments so far cover only the listed equity portfolios in the McGill Investment Pool; the university's *2022 Investment Committee Report on Socially Responsible Investing* said that these made up 58% of the Pool at end-2022 and that the university would look into adding fixed income assets (14% of the total) in 2023 (2022: 4, 7) As noted above, University of Toronto's first (2020) carbon footprint commitment covered both the endowment and pension funds. UTAM's 2022 Carbon Footprint report, however, presents both the old and the new commitments as pertaining solely to the endowment fund, and indeed doesn't mention the pension fund at all (p.02). This may be because the University of Toronto joined the University Pension Plan in 2021 and no longer manages its own pension funds (2021: 07); we do not know whether the UPP trustees have taken on the original 40% reduction commitment for the U of Toronto pension funds (see further [here](#)). Turning to the types of investment covered, UTAM's first carbon footprint report from 2018 covered only public equities, but more recent reports have included corporate bonds (2022: 02). McMaster has committed to following TCFD reporting requirements for its three investment portfolios (the Investment Pool, Pension Trust and Hourly Pension Trust), but its carbon footprint reduction commitments apply only to the Investment Pool and cover public equities and infrastructure (2020-21: 26, 32).

The implications of these limitations are clear: just as university decarbonization commitments apply to only a subset of carbon emissions, they usually apply to only some university funds (with endowment commitments more common than pension ones – see also Ramani et al. 2023: 2) and to some classes of investment (with equities most common).

With regards to justification, finally, while some universities explain their partial financial instrument coverage in terms of emissions data availability, we did not find any explanations for why some universities have chosen to cover both endowment and pension funds while others have left pensions out.

The analysis in this section suggests the following follow-up questions university communities should be asking of their leadership and budget managers:

1. What are the university's investment funds, and what are their market values?
2. To which of those funds do the carbon footprint commitments apply, and what percentage of the university's total investment value do they represent?
3. What types of financial instrument (equities, bonds, mortgages, etc.) are included in the reporting for those funds, and what percentage of the market value of the funds for which carbon footprint commitments have been made do they represent?
4. Combining 2 and 3, to what percentage of the university's investments do carbon footprint commitments apply?
5. And crucially, how does the university justify the exclusions in its commitments (see also CCSI 2023: 19)?

### *2.5 What is the reduction target (how much, compared to what, by when), and how is it justified?*

In addition to choosing a metric to target and making decisions about which emissions scopes, which investment funds, and which types of investment to include and exclude, university investment carbon footprint commitments also need to state the size of the reduction aimed for, the deadline, and the figure against which the reduction will be measured. The size and deadline are usually included in headline commitment statements, but the baseline/benchmark may not be.

Most universities use their own investment emissions from a past year as the baseline. Laurier's Endowment emissions benchmark is the figure as of December 31, 2019. The University of Toronto's first, 2020 commitment [used a 2017 baseline](#), while the new commitment, made in 2021, [moved the baseline to 2019](#) (p.02). 2030 is a popular deadline year, but earlier years have also been chosen (McGill's is 2025).

Queen's takes a less common approach in using as its benchmark not the past emissions of its own investments but the current carbon footprint of the equities in the MSCI All Country World Index; the university's target is for its public equity portfolio to have "at least 25% lower carbon emissions" than the benchmark by the end of 2030 (2023: 14). Queen's explains this approach as follows:

The university sees using a relative target as much more aggressive than setting an absolute reduction target relative to a base year, due to the inevitable transition toward carbon-neutrality over time. The more the carbon footprint of the benchmark falls over time, the more aggressive the university target becomes.

McGill also targets a “public equities benchmark” rather than a past baseline year in its investment commitments, but we did not find an explanation of what that benchmark is. [Laval](#), Ottawa (2022: 18), [UBC](#) and [Waterloo](#) have all reported investment emissions against a benchmark without formally targeting reductions relative to it, though all these benchmarks, too, are unspecified in the university documents we consulted.

While there is an unavoidable arbitrariness to picking a numerical reductions target, it is notable that universities do not generally give an explanation of why they picked the number they did. University communities should thus ask their leadership and budget managers how they justify the size, the nature, and the pace of their reductions target. What issues were considered, for instance, in determining what degree of emissions reduction the university could potentially achieve and in deciding what speed of movement is needed, given the severity of the climate crisis?

### 3. What data and frameworks do universities use to calculate their investment carbon footprints, and what data, statistics and metrics do they disclose?

#### *3.1 What companies does the university hold investments in and how big are those investments?*

These are obvious first questions to ask about a university’s carbon footprint data. While carbon footprints can be calculated in different ways, no calculation can even begin in the absence of information about investee companies and investment size. Most universities we reviewed, however, do not appear to disclose this information publicly. Among the Climate Charter universities, we found detailed (though partial) lists of investment holdings only for [Dalhousie](#), [Ottawa](#), [Queen’s](#), and [UBC](#). Dalhousie’s disclosures show the company name, value, and percentage of the total market value held for each investment; Queen’s gives company names, number of shares/investment units, and market value; UBC’s show company names and the company’s weight in the fund in question; and Ottawa just lists company names with no value information. We may have failed to find comparable disclosures from other reviewed universities.

Critical analysis of a university’s carbon footprint reporting is much harder to undertake if a university keeps the companies it invests in a secret. [UBC states](#) that UBC IMANT began disclosing the Endowment’s public equities holdings specifically in order to improve the transparency of its Responsible Investing Strategy – a highly commendable move. Detailed disclosures can, for instance, help to answer one of the questions we asked above: whether a university is meeting its carbon footprint commitments by reallocating investment to firms like banks that have low Scope 1 and 2 emissions but may have very high Scope 3 ones. Dalhousie’s disclosure shows that as of March 31, 2022, Dal’s equity and fixed income investments in Bank of Montreal, Bank of Nova Scotia, Royal Bank of Canada, and TD Bank made up 3.22% of the market value of its holdings. UTAM does not seem to disclose company-level holdings, but it does provide a helpful sectoral breakdown of its holdings that allows similar calculations at a higher level of aggregation. Waterloo’s RIAG also recommended that the university provide such a breakdown (2021: 36).

Lack of disclosure also, of course, makes it impossible for outsiders to even try to replicate a university's carbon footprint calculations, and thus raises basic questions about how trustworthy the reported numbers are. We consider the implications below, but for now raise some follow-up questions that universities should be asked:

1. Does the university disclose its company-level investment holdings (or at least some significant portion of those holdings, like equities and bonds)?
2. If it doesn't, why not? Given that some universities are able to make this information public, why does this university not do so? Has the justification been publicly stated anywhere? Does it stand up to scrutiny?

### *3.2 Where does the carbon emissions data for the companies the university invests in come from, and what makes it credible?*

Canadian universities have surprisingly little to say about the sources of the corporate carbon emissions data that form the basis of their investment carbon footprint calculations. Some do not appear to raise the issue at all, and some that do offer only vague treatment of the topic. McMaster (2021a: 27), McGill (2022: 7), Ottawa (2021: 8), Queen's and Simon Fraser (2022: 5) all refer to data as having come from MSCI, an American firm that [describes itself](#) as providing "industry-leading, research-enhanced solutions to gain insight into and improve the investment process." Queen's says that it has, "similar to many university peers, subscribed to a carbon data service provided by MSCI" (2023: 18). These statements, however, do not say where MSCI gets its data from. We found no direct statement from any Canadian university regarding the ultimate source of the corporate-level emissions data that underpin its carbon footprint calculations.

Gaining insight into this question thus requires going beyond university documents to the broader literature on climate finance and accounting. We are, again, not experts in this field, but the CCSI report cited above gives some insight (2023: 44). It notes that "The GHG Corporate Reporting Protocol is the most widely used GHG accounting standard" and that it has influenced the construction of many other reporting initiatives including the TCFD. Companies and financial institutions use this Protocol to calculate their carbon footprints; that is, corporate carbon emissions data under this approach are not generated by independent third parties but by companies themselves. Moreover, the CCSI report notes that the GHG Protocol,

still has room to grow to provide the level of standardization and comparability necessary to provide companies and investors with actionable data. Under the reporting frameworks based on the GHG Protocol, reporting companies are not required to disclose how they calculated their emissions estimates, if they measured the data themselves, if they sought data from the other companies in their supply chains, or what type of research they did to rigorously prepare for their disclosures. In addition, the system boundaries (defining the sources of emissions to be counted) are not necessarily fixed and comprehensive, and some emission streams can be underreported.

Among the many doubts this statement should raise, one basic question a critical analyst of university carbon footprint reporting would want answered is: do (any of) the companies the university invests in use offsets to reduce their reported GHG emissions? Offsets, or [reductions, avoidance, or sequestering of greenhouse gases that are taken to compensate for emissions occurring elsewhere](#), are widely used in corporate emissions reporting, but there is a [large body of research](#) showing that many offset claims are unreliable (see also CCSI 2023: 16, 54-56) and some offsetting projects have actively caused harm. We need to know whether the carbon footprints of Canadian university investments might be dropping because of dubious or dangerous corporate offsets, but our review suggests that there has been no transparency on this issue from any university.

It may be of course that answers to some of these questions could be found in the literature or provided by MSCI or other data providers. One of the core principles of our analysis, however, is that universities should not require readers of their responsible investment reports to do extensive original research to understand what their reports mean and what their gaps and silences might be. Universities should be providing this information themselves.

Based on the multiple gaps and silences in this dimension of carbon footprint reporting, our follow-up questions for university communities to focus on here are:

1. Who generated the GHG emissions data for the individual companies in which the university has investments?
2. Is the company-level emissions data publicly available, and if so where? If it isn't, why isn't it? If the data is proprietary, what are the implications for transparency in university reporting?
3. Did all the companies the university invests in calculate their GHG emissions data in the same way?
4. Do any of the companies the university invests in use carbon offsets to reduce their reported emissions? If so, should these offsets be seen as credible?
5. Why should the reported emissions data for the companies the university invests in be trusted?

### *3.3 Was company-level emissions data available for all of the companies in which the university has investments? If not, what was done about the gaps?*

In discussing question 3.2, we assumed that university carbon footprint calculations were based on reported emissions data for all the companies in which the university invests. It is unlikely, however, that this is ever the case. [A UN Principles of Responsible Investment document on "Climate Metrics"](#) notes that "Investors should be mindful that GHG emissions metrics are often based on partial data, because not all assets / entities report accurately and consistently on their emissions, and data providers use a range of methodologies to fill in the gaps." A 2022 report identifies major challenges to and problems with estimation methodologies and points out that transparency about the use of estimation is often low (Simmons et al. 2022).

References to data availability are scarce in the Canadian university reporting we reviewed. The University of Toronto's UTAM, in its first carbon footprint report in 2018 (p. 07), stated that it had reported data for 27% of the 8,782 public equity holdings in the pension and endowment funds, estimated data for 48%, and no data for 25%. Things looked better when expressed in terms not of individual holdings but of the holdings' market values; measured in this way, UTAM had reported data for 61% of the market value of pension holdings, MSCI estimates for 32%, and no data for 7% "as these companies did not provide emissions data and MSCI did not estimate the emissions".

McMaster discusses data availability in its *Annual Financial Report 2020-21* (2021a: 30-31), and seems to have had reasonable access to data. The university claims that it had over 90% data availability for measuring the WACI or tCO<sub>2</sub>e/\$1M sales for public investments in its Investment Pool, while availability for the broader group of investments in the Investment Pool (including fixed income) was 72% to 82% and that those carbon measurements "are therefore less reliable." [More recent reporting from McMaster](#) puts data availability for the Investment Pool's WACI at 78.7% overall and 94.8% for public equities and public infrastructure.

This information obviously raises the question of what is to be done about missing data. [McMaster states](#) that "Where data is not available, Scope 1 and 2 carbon emissions are estimated using MSCI's proprietary carbon estimation model."

Our follow-up questions on this point are:

1. For what percentage of the university's holdings (measured by individual holding and by market value) does the university have reported company-level data?
2. What does the university (or the body that calculates the university's carbon footprint) do about absent data? Does it generate estimates for missing data? If so, how, and what information does it disclose about the process?

### *3.4 By whom was the carbon footprint data for individual companies converted into the university investments' overall carbon footprint?*

Above we have discussed the metrics and associated formulas that Canadian universities use to conceptualize and report their investment carbon footprints and the investee company emissions data (reported or estimated) that is used in the calculations. The actual work of calculation can presumably be done either by the university using data and (likely) methodologies provided by other institutions, or by a third party. Here we simply ask who did the work of plugging the data into the formula. It is surprisingly uncommon for universities to state directly who calculated their investments' carbon footprints. The University of Ottawa (2021: 8) gives MSCI as the "source" of its 2015 and 2016 investment carbon footprint numbers, and MSCI also calculates Simon Fraser's numbers ([Simon Fraser 2022: 5, 9](#)). UTAM seems to do this work itself (2018: 04).

### *3.5 What steps have been taken to guard against simple calculation errors?*

We did not see any reference in any university document to the possibility that the university's carbon footprint calculations might contain simple errors such as data entry or calculation mistakes.

Universities should acknowledge this possibility and explain what if anything they have done to guard against error. UTAM hired PWC to carry out assurance reports for its 2021 RIR (pp. 15-16) and its 2022 CF report (pp. 02-04); this is the only example we found of a Canadian university engaging a third party to check its (or its consultants') work.

### *3.6 What metrics and other data and statistics does, and should, your university include in its reporting?*

This question returns to, and expands, our discussion of targets and metrics under questions 2.1 and 2.5. Our main point is that universities should report more than simply the final output of the formulas they use to calculate carbon footprints; they should report as much as possible of the base data used in the calculation process, along with the formula's intermediate outputs.

We explain what we mean here by working through the formula that UTAM uses to calculate "carbon emissions per USD \$million" and Queen's uses to calculate "(normalized) carbon footprint". The base data used to calculate this number is:

- for each company in which the university has investments:
  - the company's market value,
  - the value of the university's investment in the company, and
  - the company's emissions measured in tCO<sub>2</sub>e (reported, estimated, or otherwise);
- the value of the university's portfolio in the currency of choice (presumably USD or CAD).

The formula also generates as intermediate outputs:

- the absolute emissions from each company that are treated as the university's 'share' of that company's emissions (in tCO<sub>2</sub>e), and
- the sum of those emissions (the total carbon emissions associated with the university's portfolio(s)).

Ideally, all this data should be publicly reported, and if universities are not reporting it they should explain why not. Reporting the company-level data would allow external observers to see what the main sources of the university's carbon footprint are, let them see which companies report data and for which it was necessary to use estimates, and facilitate checking for errors. It would also increase trust in university carbon footprint reporting; as it stands, all reviewed Canadian universities except Toronto (which, again, has had its calculations externally audited) seem to be asking us to take their numbers on faith. UTAM has also made the welcome move of publishing the breakdown of its carbon footprint by sector and by country (2021: 18); these numbers are not inputs or outputs of the formula process, but they are very helpful in understanding the university's carbon footprint and its change over time. Other universities should follow this example.

Even if universities do not or cannot report granular, firm-level data, it is essential that they report at least the total absolute carbon emissions associated with their investments (in tCO<sub>2</sub>e) and the investments' value in dollars. These figures are essential for reasons discussed under Question 2.2:



they make it possible to see to what extent reductions (or increases) in the normalized carbon footprint numbers most or all Canadian universities target are due to changes in reported GHG emissions as opposed to those in things like investment values or corporate sales that are used as denominators in normalized metrics. [Waterloo's reporting](#) is a positive example of this basic level of data disclosure. McGill's responsible investment reports, on the other hand, do not even report tCO<sub>2</sub>e/\$M numbers (let alone absolute emissions), but only the value and asset allocation of the McGill Investment Pools and how many percent below the market benchmark McGill's tCO<sub>2</sub>e/\$M numbers are.

It should also be recalled that some universities report more metrics than they target. As noted above, UTAM reported four different metrics in 2018; it has narrowed its reporting range since it made its first carbon footprint commitment in 2020.

The follow-up questions to ask leadership and budget managers here are:

1. What data, statistics, and metrics does the university report?
2. What relevant data and statistics does it not report, and why not?
3. Does it at least report absolute (tCO<sub>2</sub>e) portfolio emissions and the size (in dollars) of the portfolio(s) for each reporting year?

### *3.7 What has the university done to try to reduce its investment carbon footprint, and what explains actual changes in the carbon footprint?*

In reporting on changes in the carbon footprint of their investments against a baseline/benchmark and from year to year, universities should provide a narrative explanation of both the measures they have taken to try to lower their investment carbon footprint and the actual sources of change in the reported number. The apparent ability of some Canadian universities to achieve rapid and massive reductions in their investment carbon footprints is *prima facie* surprising and calls out for explanation. Many reviewed universities, including [Laurier](#), McGill (2021: 8), Queen's (2023: 13), and UBC (2022: 4) do give some account of what has happened, and aspects of these explanations have been referenced above. Waterloo's Responsible Investing Advisory Group recommended in its 2021 report (p.8) that "The annual disclosure report should also endeavour in due course, once the quality of available information permits, to attribute changes in carbon footprint to management actions, market developments, or currency movements". We think that it is key that universities explain things as systematically as possible, and that they do what they can to consider all the possible sources of change and to persuade observers that their account is complete and accurate. In discussing these themes, we assume that the university in question hires investment managers, but the following points can easily be modified for universities that do their own investing.

First, universities should explain what they have done to try to lower their investment carbon footprint. These measures could include changing investment managers to favour those with expertise in building lower-carbon portfolios, trying to persuade their managers to shift to lower-carbon investments, and encouraging managers to try to persuade companies in which they are invested to lower their emissions.

Second, universities should do what they can to identify the actual causes of changes in their reported carbon footprint numbers and their components. The measures the university has taken will presumably be among these causes, though that should not be taken for granted.

In explaining carbon footprint changes, universities that use “normalized” metrics should distinguish clearly between changes in the numerator and the denominator. Numerator changes are changes in the university’s share of the reported actual GHG emissions of the companies in the relevant parts of its portfolio. Measures the university has taken, like changing or working with managers, will presumably be important here. It is also important to recognize that, as we have discussed above, changes in the reported actual corporate emissions that together construct the numerator could be the result of things other than, or only tenuously connected to, actual emissions reductions, including shifts in reporting practices, use of offsets, and errors. Universities will likely have no access to information about those sources of ‘change’ and should be up-front about that fact.

Universities should take particular care to explain the contribution of changes in denominator values to changes in normalized carbon footprint figures. This is because those changes have nothing to do with actual emissions reduction. They include:

- For the tCO<sub>2</sub>e/\$M invested metric, a change in the portfolio’s value through movements in equity and other investment markets. Rising investment market value will make normalized carbon footprints fall, and vice-versa.
- For WACI, changes in corporate sales figures.
- Changes in exchange rates between the measurement currency (usually, again, USD or CAD) and the other currencies in which investments are denominated. This kind of change becomes more significant to the extent that universities invest in assets not issued in their denominator currency.

We note and appreciate again the open acknowledgement in UTAM’s 2021 Responsible Investment Report (p.17) that most of the change in its reported investment carbon footprint came from the ‘denominator effect’ rather than actual changes in portfolio emissions.

Here again we would like to express our puzzlement at the choice of so many Canadian universities to target normalized/intensity metrics in their investment carbon footprint commitments. The climate does not, after all, respond to the ‘intensity’ of GHG emissions in an investment portfolio; it responds to actual GHG emissions. Universities should reconsider their choices of metrics. If they are going to keep their current metrics and targets, however, it is essential that they accurately and transparently state the extent to which reductions in the carbon footprints of their investments are driven by financial factors in the denominator that do not reduce the actual GHG emissions associated with their portfolio.

## 4. The big question

### 4.1 *Why are universities doing this?*

Our final question both backs away from and tries to pull together all of the detail presented above. One striking feature of the university documents about investment carbon footprint reduction we reviewed is that none of them provides a clear, explicit explanation of how investment decarbonization actually contributes to climate action. While some universities have sought to explain why they chose carbon footprint approaches instead of divestment (Foley 2020) and some point to the pledges (like the Carbon Charter) and frameworks (like TCFD) they have signed up to and drawn on, none states why and how investment carbon footprint reduction is good for sustainability. Perhaps the closest thing to a general explanation is Queen's' statement that "if everyone does their part like Queen's, the emissions of the broader market will gradually fall toward net zero" (2023: 13), but this statement raises more questions than it answers.

This absence is important because divestment and investment decarbonization have been subjected to significant critiques (see Foley 2020). The CCSI report drawn on above, for instance, emphasizes the importance of "differentiating portfolio decarbonization from impact", and argues (2023: 13-14) that,

Equity portfolios constructed with no or low carbon-intensive assets may have lower exposure to climate risk than a portfolio with high-emitting assets, but they have no climate effect in the real economy, as the outstanding shares already sold by fossil fuel companies are simply held by other owners.

The statements that a few universities have made about their efforts to engage (either directly or through their investment managers) with the companies in which they hold investments to press them to lower their carbon emissions (see UBC 2022: 2) may be more promising in this regard, in that they target reducing actual corporate emissions rather than unloading high-carbon investments onto others.

We have suggested many reasons to be skeptical of investment decarbonization as an approach to climate action in this report, and we do not take a position on its overall usefulness here. We insist, however, that universities making investment carbon footprint reduction commitments must take one. They cannot assume that carbon footprint reduction is beneficial, or that its benefits are demonstrated by others; they must lay out the 'theory of change' that justifies their claims that it contributes to their actions on sustainability. In the absence of such an explanation, none of the details we have covered above are really relevant.

## Concluding thoughts

In concluding we want to emphasize two core messages of our analysis. The first is that carbon footprint reporting is extremely complex. If it is true that properly understanding and evaluating a university's investment carbon footprint claims requires familiarity with all the terminology, frameworks, assumptions and arguments covered above (familiarity that it took us a great deal of

work to achieve), then very few members of university communities will be able or inclined to take on the challenge. The other two main approaches to applying climate action principles to investment adopted by some Canadian universities, divestment and impact investing, are much easier to understand.

A second core message is that university carbon footprint reporting has major problems. The corporate emissions data these reports are based on seems to be inaccessible to outsiders and its trustworthiness is not obvious. It is unclear whether companies rely on dubious 'carbon offsets' to reduce their numbers. Most universities leave significant portions of their investments outside their commitments. None clearly includes Scope 3 emissions in their commitments – an understandable but massive omission that may undermine the whole project of investment decarbonization. The targeting of normalized rather than actual emissions reductions makes Canadian university communications prone to misleading and sometimes inaccurate claims. And most basically, we have found no clear explanation from a Canadian university of how 'carbon footprint reduction' actually helps to reduce real-world carbon emissions – presumably the point of the exercise.

One possible conclusion to draw from our work is that Canadian universities need to do a much better job of explaining their carbon footprint commitments and disclosing relevant information so that members of the university community and the public can more easily understand and evaluate them. Another, however, is that if carbon footprint commitments are both hard to understand and compromised by major problems and gaps, then this game may not be worth the candle.

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