

October 13, 2017

To the Responsible Investment Working Group:

Thank-you for the opportunity to submit our comments on whether and how to incorporate environmental, social and governance (ESG) factors into decision making for the investment of the university's endowment and pension funds. We appreciate the convergence of the Province's mandate to issue a position on ESG, with the call put before you by students and faculty explicitly to consider climate change, climate risk, and fossil fuel divestment as part of this important conversation.

As you know, in the fall of 2015, environment students voted specifically for fossil fuel divestment from their Waterloo Environment Students Endowment Fund. They took a stand against investments that are only profitable at the expense of catastrophic climate change, and 68 faculty members from across the University supported their appeal. The faculty issued a call to our President and to the Board of Governors asking that they assess the financial risks posed by climate change to the University of Waterloo's endowment and pension plans, disclose the extent of the University's investment in fossil fuels, commit to no new investment in fossil fuels, and develop a strategy to divest the university from existing holdings in the fossil fuel industry.

The call for divestment is being increasingly heard and acted upon. By the end of 2016, 688 institutions across 76 countries committed to divest from fossil fuel companies.¹ Investment funds valued at over \$5.3 trillion have committed to selling off fossil fuel assets – ranging from the world's biggest sovereign wealth fund to a long list of academic institutions² – and this number doubled in just over a year.³ From Oxford to Monash to Laval⁴, universities around the world are boldly committing to this action.

The environmental and health evidence for supporting this action is unequivocal. A seminal study on carbon emission targets calculates that if global temperatures are to be limited to under 2°C, carbon emissions must be limited to 886 billion tonnes (Gt) CO₂ between 2000 to 2050.⁵ This is the 'carbon budget' – the total amount of emittable carbon below the 2°C threshold. Any effort to limit global temperatures at the 2°C target will require nearly 80 percent of proven reserves remain grounded. This is the groundwork that inspired Bill McKibben's 'Do the Math' and resulting fossil-fuel divestment

¹ Arabella Advisors, *Global Divestment Report, 2016*. [https://www.arabellaadvisors.com/wp-](https://www.arabellaadvisors.com/wp-content/uploads/2016/11/2016-Globe-Global-Divestments-Report-2016.pdf)

² <https://www.gofossilfree.org/commitments/>

³ Fossil fuel divestment funds double to \$5tn in a year. (Dec 12, 2016):

[https://www.theguardian.com/environment/2016/dec/12/fossil-fuel-divestment-funds-double-5tn-in-a-year.](https://www.theguardian.com/environment/2016/dec/12/fossil-fuel-divestment-funds-double-5tn-in-a-year)

⁴ <https://www.gofossilfree.org/commitments/>

⁵ Meinshausen, M., Meinshausen, N., Hare, W., Raper, S. C. B., Frieler, K., Knutti, R., ... Allen, M. R. (2009). Greenhouse-gas emission targets for limiting global warming to 2 degrees C. *Nature*, 458(7242), 1158– 1162.

campaign, to raise a movement that will address the ‘terrifying’ new mathematics of climate change.⁶

At our current trajectory we are on track for a temperature increase of 3°C over the next fifty years.⁷ The potential environmental and ecological impact of this transformation is great. In the preceding fifty years, we have already witnessed anthropogenic influences that have contributed to ocean warming, global mean sea level rise, the acidification of surface ocean waters, changes to global land precipitation, increases in atmospheric humidity, changes to the global water cycle, contributions to Arctic sea ice loss, the melting of ice sheets, the retreat and melting of glaciers, changes in the frequency and intensity of daily temperature extremes on the global scale, and a global-scale intensification of heavy precipitation.⁸ These effects are contributing to fundamental ecological transformation, and a biodiversity loss being described as the sixth mass extinction.⁹

The associated impact on human health and wellbeing is no less dire. The Lancet’s Commissions on Health and Climate Change,¹⁰ and Planetary Health^{11,12} reveal the breadth of the challenge. Exposure to excessive daily heat leads to heat stroke, while extreme weather events, including storms, floods, and droughts, increase risk of injury risks and of infectious diseases. Indirect effects include malnutrition and under-nutrition due to failing local agriculture, and the spread of vector-borne diseases and other infectious diseases, while systemically mediated population health impacts include famine and conflicts. Research is increasingly finding links between climate change and chronic disease,¹³ while the mental health impacts are being felt by both Australian farmers and Canadian Indigenous youth, and beyond.¹⁴ Around the world already nearly

⁶ McKibben, B. (2012). Global warming’s terrifying new math. *Rolling Stone*, 19(7), 2012. Retrieved from <http://www.rollingstone.com/politics/news/global-warmings-terrifying-new-math-20120719>

⁷ UNEP. (2016). *The Emissions Gap Report 2016: A UNEP Synthesis Report*.

<https://europa.eu/capacity4dev/unep/document/emissions-gap-report-2016-unep-synthesis-report>

⁸ IPCC. (2013). https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter10_FINAL.pdf.

⁹ Ceballos, G., Ehrlich, P. R., Barnosky, A. D., García, A., Pringle, R. M., & Palmer, T. M. (2015). Accelerated modern human-induced species losses: Entering the sixth mass extinction. *Science advances*, 1(5), e1400253.

¹⁰ Watts N, Adger WN, Agnolucci P, Blackstock J, Byass P, Cai W, et al. Health and climate change: Policy responses to protect public health. *Lancet*. 2015;386(10006):1861–914.

¹¹ Whitmee S, Haines A, Beyrer C, Boltz F, Capon AG, De Souza Dias BF, et al. Safeguarding human health in the Anthropocene epoch: Report of the Rockefeller Foundation-Lancet Commission on planetary health. *Lancet* [Internet]. 2015;386(10007):1973–2028. Available from: [http://dx.doi.org/10.1016/S0140-6736\(15\)60901-1](http://dx.doi.org/10.1016/S0140-6736(15)60901-1).

¹² Horton R, Beaglehole R, Bonita R, Raeburn J, McKee M, Wall S. Comment From public to planetary health : a manifesto. *Lancet*. 2014;383(Mm):847.

¹³ Kjellstrom, Tord, and Anthony J. McMichael. "Climate change threats to population health and well-being: the imperative of protective solutions that will last." *Global health action* 6.1 (2013): 20816.

¹⁴ Bourque, Francois, and Ashlee Cunsolo Willox. "Climate change: the next challenge for public mental health?." *International Review of Psychiatry* 26.4 (2014): 415-422.

1,000 children are now dying every day because of climate change, and the annual death toll stands at 400,000 people worldwide.¹⁵

Health scientists urge us to transform our current practices if we are to respond to the threats before us – we must embrace, “a new principle of planetism and wellbeing for every person on this Earth—a principle that asserts that we must conserve, sustain, and make resilient the planetary and human systems on which health depends by giving priority to the wellbeing of all”.^{12 pg. 847}

The ethical imperative to act is clear, and divestment offers a way forward that also offers a financial win. Literature on responsible investments infer that it is favourable to account for environmental, social, and governance (ESG), and sustainability factors in investment decisions. In fact, a publication by UNEP-FI (2015)¹⁶ draws on the argument that the failure to consider ESG indicators in investment decisions is a failure of an investor's fiduciary duty; integrating ESG considerations in contrast, enables investors to make prudent financial decisions and improve their financial performance. In a similar vein, Walker et al. (2014)¹⁷ propose that investors who account for sustainability criteria within the capital asset pricing model can effectively manage their portfolios to maintain direct returns today, while concurrently mitigating indirect long-term risks. In contrast to the traditional perspective that responsible investments constrain diversification and thereby performance,¹⁸ recent studies suggest that the performance of socially responsible funds may not differ significantly from conventional funds,¹⁹ and may even outperform the conventional investments.²⁰ Evidence to date suggests that portfolios that reduce their carbon exposure can outperform market indexes.

In regard to environmental risks from the fossil fuel industry, a number of studies compare the financial performance of prevalent market indices to fossil free counterparts. The MSCI ACWI ex fossil fuels index, for instance, tends to comparably or out-perform the MSCI ACWI over a five year period.²¹ Another complementary report by the FTSE finds that their counterpart ex fossil fuel index performs competitively with lower

¹⁵ DARA. (2017). Climate Vulnerability Monitor: <http://daraint.org/wp-content/uploads/2012/09/CVM2ndEd-FrontMatter.pdf>.

¹⁶ UNEP. (2015). Fiduciary Duty in the 21st Century. UNEP-FI. Retrieved from http://www.unepfi.org/fileadmin/documents/fiduciary_duty_21st_century.pdf

¹⁷ Walker, T. J., Lopatta, K., & Kaspereit, T. (2014). Corporate sustainability in asset pricing models and mutual funds performance measurement. *Financial Markets and Portfolio Management*, 28(4), 363–407.

¹⁸ Rudd, A. (1981). Social responsibility and portfolio performance. *California Management Review*, 23(4), 55– 61.

¹⁹ Bello, Z. Y. (2005). Socially Responsible Investing and Portfolio Diversification. *Journal of Financial Research*, 28(1), 41–57.

²⁰ Weber, O., Mansfeld, M., & Schirrmann, E. (2012). The Financial Performance of RI Funds After 2000. In W. Vandekerckhove, J. Leys, K. Alm, B. Scholtens, S. Signori, & H. Schäfer (Eds.), *Responsible Investment in Times of Turmoil* (pp. 75–91). Springer Netherlands.

²¹ MSCI. (2016). MSCI ACWI ex Fossil Fuels Index. MSCI. Retrieved from https://www.msci.com/resources/factsheets/index_fact_sheet/msci-acwi-ex-fossil-fuels-index-gbpgross.pdf.

volatility than the traditional FTSE developed index.²² Yet another study by Sustainable Insight Capital Management finds that of three fossil fuel free portfolios created, all outperformed the S&P 500 across 1, 3, and 5 year periods between 2008 and 2013.²³ Most recently, a study on the Canadian market also finds that fossil free portfolios outperform their associated benchmarks, with a more superior risk-return trade-off than traditional portfolios.²⁴ These results are further attested across analyses conducted by organizations like the Carbon Disclosure Project²⁵ and Impax Asset Management,²⁶ which suggest that by reducing carbon exposure in their portfolio, investors can achieve competitive if not greater returns. (For a more detailed review of divestment literature see Appendix A.)

With this ESG review the University of Waterloo has an incredible opportunity to rethink the way our investments are made, and to make choice that will benefit both our planetary and our University's financial health. In line with the 68 University of Waterloo faculty who wrote to President Hamdullahpur and Members of the Board on February 1st, 2016, we students with Fossil Free UWaterloo ask that:

1. The University of Waterloo commit to no new investment in fossil fuels.
2. The University develops a strategy to divest from holdings in the fossil fuel industry. We call on you to ensure that these funds are divested completely in the next five years.
3. You commit to our further disclosure requests. (See Appendix B for our detailed request).
4. Beyond divestment, you commit to standardized climate risk assessment and reporting, such as with the adoption of the *Taskforce for Climate-related Financial Disclosure* (TCFD) standard.²⁷

So far over 250 students, alumni, staff and faculty have signed our online and hardcopy petition²⁸ (See Appendix C for comments). We ask you to stand with us and make this

²² FTSE. (2014). FTSE Developed ex Fossil Fuel Index Series. FTSE Russell. Retrieved from http://www.ftse.com/products/downloads/FTSE_Stranded_Assets.pdf.

²³ Willis, J., & Spence, P. (2015). The Risks and Returns of Fossil-Fuel-Free Investing. *Journal of Environmental Investing*.

²⁴ Hunt, C. (2016). *Divesting and Re-investing in a Greener Future for Canada*. (O. Weber, Ed.). University of Waterloo.

²⁵ Fanelli, E. (2012). Carbon reductions generate positive ROI. Carbon Disclosure Project. Retrieved from <https://www.cdp.net/CDPResults/CDP-Carbon-Action-Report-2012.pdf>

²⁶ Simm, I. (2013). *Beyond Fossil Fuels: The Investment Case for Fossil-fuel divestment*. Impax AM. Retrieved from <http://www.impaxam.com/sites/default/files/20130704%20Impax%20White%20Paper%20fossil%20fuel%20divestment%20FINAL.pdf>.

²⁷ Taskforce for Climate-related Financial Disclosure. <https://www.fsb-tcf.org/>

innovative choice that also reflects our UW values. The University of Waterloo has committed to promoting integrity as a core value of our campus community. Our university must make decisions that reflect our values – to be in *Concordia cum veritate*, "In Harmony with Truth". Climate change is a truth that cannot be denied – and thus requires immediate action. It is time for the University of Waterloo to bring our practice in the world in line with what we are learning in the classroom.

In hope,

Students for a Fossil Free UWaterloo²⁹

²⁸ <https://www.change.org/p/university-of-waterloo-divest-from-fossil-fuels-and-invest-in-a-greener-future>

²⁹ Fossil Free UW is a student-led group that envisions a University of Waterloo that is leading Canada in the technological, economic, and social transformation toward a carbon-neutral future. We envision a community, which acknowledges the scientific consensus on the need to establish a carbon budget and recognizes the injustices experienced by communities acutely affected by climate change and the fossil fuels industry. Our vision is an engaged and knowledgeable campus that uses our diverse areas of influence and expertise to take meaningful action toward an equitable and sustainable future. For more information see: <https://fossilfreeuw.ca/>.

APPENDIX A - DIVESTMENT LITERATURE REVIEW

Climate Action

The science of climate change is well understood; the increased production of long-lived greenhouse gases in the atmosphere have on average raised global temperatures by 0.8°C from the pre-industrial era (IPCC, 2014); nearly half of the globally accepted 2°C target that was agreed upon in the Copenhagen Accord (Accord, 2009). Increased concentrations of carbon dioxide (CO₂) emissions, most affiliated with increased fossil fuel use (Quéré et al., 2013), continue to accumulate in the atmosphere well above the safe level of 350 parts per million (ppm), effectively raising global temperatures toward the 2°C threshold (Hansen et al., 2008). For context, mean global emissions currently sit at over 404 ppm (Dlugokencky & Tans, 2016) outpacing the mid-Pliocene era, a time period where natural carbon levels were estimated to be between 360 to 400 ppm, mean global temperatures were two to three degrees warmer than pre-industrial times, northern latitudes (~60°N) were five to ten degrees warmer, and sea levels were at least 15 to 25 meters above modern levels (Stocker et al., 2014). Similar impacts in the global climate system have not been experienced to date, however, the accumulation of carbon through the human activity has been much faster than natural progression. An additional 2°C over preindustrial levels could be disastrous for global food and water systems, human health, ecosystems, and economic assets (IPCC, 2014), irreversibly transforming people and the ecosystems they depend on across an increasingly inhospitable anthropocene era. Thus, to mitigate the worst of catastrophic climate change, global temperatures must be limited to under the 2°C threshold and consequently, carbon emissions must be stabilized at a safe operating space for humanity.

A seminal study on carbon emission targets calculates that if global temperatures are to be limited to under 2°C, carbon emissions must be limited to 886 billion tonnes (Gt) CO₂ between 2000 to 2050 (Meinshausen et al., 2009). This is the ‘carbon budget’; the total amount of emittable carbon below the 2°C threshold. Any effort to limit global temperatures at the 2°C target will require nearly 80 percent of proven reserves remain grounded. This is the groundwork that inspired Bill McKibben’s ‘Do the Math’ and resulting fossil-fuel divestment campaign, to raise a movement that will address the ‘terrifying’ new math of climate change (McKibben, 2012). If the carbon budget is to be met, the grounded reserves and related activities may suffer premature write-downs and effectively become worthless (Caldecott, Tilbury, & Carey, 2014). The fossil fuel divestment campaign primarily targets 200 of the largest publicly listed fossil fuel firms (Alexeyev, Connolly, Di Rosa, Francis, & Palmier, 2015) based on the potential CO₂ emissions of their reported reserves. As of December 2015, over 3.4 trillion dollars of assets under management (and over 5 billion dollars in funds) have been pledged to be withdrawn from the fossil fuel sector (Arabella Advisors, 2015; Fossil Free, 2015; Nussbaum, 2015). Investors can choose to divest from all fossil fuel stocks or to divest

from selected firms by risk profile, subsectors, or worst offenders (Paum, 2015). Withheld capital can directly or indirectly affect a firm's decision.

The Duality of Divestment

Divestment is most commonly pursued as means of shareholder activism - to weaken the industry and limit carbon emissions or to manage against the risk of asset stranding. Investors as shareholders are driven by value maximization. That implies that a rational investor would prefer to invest in the portfolio with the most favourable risk-return profile (Markowitz, 1991; Sharpe, 1994). Under a financial perspective, the pursuit of divestment must therefore offer competitive or better financial returns. Comparably, Investors as stakeholders play an important role in guiding corporate responsiveness. Those investors who are most salient to the firm (Mitchell, Agle, & Wood, 1997) also have the most influence on corporate decisions. Under a stakeholder view, investor's must be certain that their decision to divest does in fact influence the fossil fuel industry. Thus, for divestment to be pursued the campaign must be perceived to both 'do well' and 'do good' for the investor.

A Shareholder Perspective to Divestment

Literature on responsible investments infer that it is favourable to account for environmental, social, and governance (ESG) and sustainability factors in investment decisions. In fact, a publication by UNEP-FI (2015) draws on the argument that the failure to consider for ESG indicators in investment decisions is a failure of an investor's fiduciary duty; integrating ESG considerations in contrast, enables investors to make prudent financial decisions and improve their financial performance. In a similar vein, Walker et al. (2014) propose that investors who account for sustainability criteria within the capital asset pricing model can effectively manage their portfolios to maintain direct returns today, while concurrently mitigating indirect long-term risks. In contrast to the traditional perspective that responsible investments constrain diversification and thereby performance (Rudd, 1981), recent studies suggest that the performance of socially responsible funds may not differ significantly from conventional funds (Bello, 2005) and may even outperform the conventional investments (Weber, Mansfeld, & Schirrmann, 2012). Evidence to date suggests that portfolios that reduce their carbon exposure can outperform market indexes.

In regard to environmental risks from the fossil fuel industry, a number of studies compare the financial performance of prevalent market indices to fossil free counterparts. The MSCI ACWI ex fossil fuels index for instance, tends to comparably or out-perform the MSCI ACWI over a five-year period (MSCI, 2016). Another complementary report by the FTSE finds that their counterpart ex fossil fuel index performs competitively with lower volatility than the traditional FTSE developed index (FTSE, 2014). Yet another study by Sustainable Insight Capital Management finds that of three fossil fuel free

portfolios created, all outperformed the S&P 500 across 1, 3, and 5 year periods between 2008 and 2013 (Willis & Spence, 2015). Most recently, a study on the Canadian market also finds that fossil free portfolios outperform their associated benchmarks, with a superior risk-return trade-off than traditional portfolios (Hunt, 2016). These results are further attested across analyses conducted by organizations like the Carbon Disclosure Project (Fanelli, 2012) and Impax Asset Management (Simm, 2013), which suggest that by reducing carbon exposure in their portfolio, investors can achieve competitive if not greater returns. Again, economic factors like oil prices have played a predominant role in recent underperformance of the industry.

A Stakeholder Perspective to Divestment

The influence of shareholder activism can be direct, by reducing the demand for shares in the market or indirect, by stigmatization of the industry. In detail, Paum (2015) proposes that if discourse on divestment is perceived to be a material threat to the valuation of the industry, the efficient market will directly depress share prices in the short term in fear of future consequences to growth projections. Depressed share prices will discount the industry's projected cash flows, raise costs of capital financing, and weaken production capacity in the long run. A report by the OECD highlights two examples whereby the stigmatization of divestment has already prompted corporate response (Baron & Fischer, 2015). Peabody cites divestment in its risk disclosures as a factor that may adversely affect demand for the company's products or securities and the Australian mining industry encourages companies to pursue diversification into renewables and low carbon technologies to strengthen investor confidence. The response therefore infers that divestment may do little in the way of directly affecting the fossil fuel industry's performance, but rather will be most effective in triggering a widespread stigmatization of the industry.

A Call to Action Against Stranded Assets

In a 2°C scenario, investments in high-carbon developments could be wasted if carbon reserves are to remain grounded. For instance, capital expenditures on the exploration of new reserves would be worthless and infrastructure developments may be mothballed or entirely abandoned before their economic life. In other words, investments in high-carbon developments that cannot be used could effectively become "stranded assets". Stranded assets are defined as assets that suffer from unanticipated or premature write-downs, devaluations, or conversions to liabilities (Caldecott et al., 2014). The stranding of carbon assets in the case of fossil fuels can be caused by a number of environment-related risk factors that are poorly understood and regularly mispriced (Caldecott et al., 2014).

Markets may be mispricing the risks of unburnable carbon held by listed companies, as valuation is in part calculated by the firm's long-term growth potential. It is estimated that over 50% of a firm's value is dependent on the expected cash-flows a decade into the

future (Carbon Trust, 2008). One indicator of future production is the firm's reserve-replacement ratio, an indicator that measures whether a company is replacing more fossil fuels than is producing. Maintaining oil production and in turn firm valuation is therefore dependent on increased capital expenditures toward continually expanding proven, albeit increasingly marginal reserves (Leaton et al., 2013). The Carbon Tracker Initiative reports that the global 200 publicly listed companies invested upwards of \$674 billion in 2012 alone towards exploration, production, and refining expenditures (Leaton et al., 2013). Increasingly these companies are investing in new reserves, which are more expensive and technical marginal ventures, including bituminous sands, ultra-deepwater drilling, and shale gas production (Stockman, 2011). Moreover, as emissions, growth, and revenues remain concentrated among the largest companies (Alexeyev et al., 2015), smaller marginal producers are at risk of acquisition, as cost effective means for larger companies to expand their proven reserves.

Though it is due to shareholder pressures that firms invest in expanding reserves, investing in companies that continue to replenish proven reserves may be a risky decision. In a 2°C scenario, grounded reserves could put over \$28 trillion at risk; risks most concentrated on high-cost high-carbon sources of production like Canada (Lewis, Voisin, Hazra, Mary, & Walker, 2014). To materialize the potential implications of grounded reserves for the industry and its investors, an example in the Carbon underground report (2013) shows that Shell's valuation fell by over £3 billion in 2004 when the company contracted its proven reserves by about 20 percent - a decision that depressed stock prices by 10 percent within the span of a week (Campanale & Leggett, 2011). Moreover, unburnable carbon poses knock-on effects that not only affect investors, but also lenders, pension funds, and indeed individual savers as well. Bank lending exposures may face significant haircuts to the value of their loan books, pension funds may risk funding shortfalls to their pension entitlements as fossil fuel investments falter, and savers may face uncertainties akin to financial bubbles as their investments track carbon intensive markets (Campanale & Leggett, 2011). Financiers must therefore recognize that investing in companies that continue to allocate capital expenditures toward replenishing assets that may never be used, may prove to be a risky decision. Notably, in light of these risks, financial institutions are beginning to examine their carbon exposure and developing solutions to reduce their risk (Alexeyev et al., 2015).

Concluding Remarks

We urge the university of Waterloo to consider divestment, not only as a moral conviction, but also in recognition of changing times. This analysis expands on some key pressures at play - the mounting evidence to limit carbon emissions with a carbon budget and the rising risks of stranded assets. We frame the divestment debate back to the University - on which side of the fence do you sit? If the University believes that we must achieve our 2 degree target, we must also understand that the vast majority grounded reserves will suffer premature write-downs and effectively become worthless. It is thus in

the university's interest to act on the financial risks of climate change, by considering avenues of divestment for their pensions and endowments.

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APPENDIX B - DISCLOSURE REQUEST

Fossil free UWaterloo would like to thank the University of Waterloo for disclosing the extent of fossil fuel equity investments in the pension, and the endowment funds in 2016, including the disclosure of the breakdown by company. This information is quite limited, however, covering only half the funds, and for only one year. We are, therefore, making a formal request for further information, which we believe will prove vital to informing the Responsible Investment Working Group, and the university community as a whole, and will offer much needed information to the Board of Governors for you to make an evidence-informed decision.

We ask that you formally communicate as soon as possible what further disclosure will be forthcoming, and include a timeline that fits within the ESG consultation period.

Context

Over the coming months we will be reviewing and highlighting the extent to which the companies³⁰ named in the October 3, 2017 disclosure have worked to curtail action on climate change. Part of our ethical objection is that these companies are taking these actions on our behalf as investors. Despite their efforts, we believe fossil fuel obstruction will and should fail. Thus, we believe that the Responsible Investment Working Group should be disclosing and reviewing the ‘pure’ financial risk as experienced in world fundamentally impacted by climate change. This risk is real. See Appendix 1, and note that between 2012 and 2016 the global Stowe coal [index](#) fell by around 75%, as demand plateaued and companies, like Peabody – which were banking on climate-busting growth – filed bankruptcies.

This rapid downturn was much needed good news for the climate, even as surprised investors lost billions. Logically, how can we both cheer this environmental progress, while as investors we demand profits from these companies? To help us come into congruence on these issues, and to assist in the making of rational decisions, we ask that you share with the university community information on the extent of losses from fossil fuel investments to date.

Disclosure request:

1. Disclosure on the extent of fossil fuel investments in the other half of the funds

According to the provided documents, in 2016 equities made up 49% of the total funds with exposure to the top 200 companies of 7.24%. It appears that there is no disclosure on

³⁰ Office of Administration & Finance, University of Waterloo, May 8, 2017.

the other half of the funds, since the 3.56% exposure of the total is based on the same \$68.42 million directly invested in those companies. We request disclosure of fossil fuel investment and carbon risk – of some sort – from the bond and fixed equities in particular, as this should be feasible. While we understand that some indexed funds may be proprietary, some are not. As such, more disclosure seems reasonable.

2. Losses from past fossil fuel investments

We call on the university to find and implement feasible ways to disclose losses from past fossil fuel investments.

2a. Time series of the same disclosure

At a minimum, the university can disclose losses by providing the same information for the previous five years and comparing it to the MSCI. This publicly available [tool](#) helps investors do just that. If necessary, we will undertake this analysis ourselves using whatever information is publicly available.

2b. Established practice

In general, a number of institutions and funds have reported – or had third parties estimate – losses from fossil fuel investment. One [report](#) found that across a set of funds in Australia fossil fuel losses between 2014-2016 amounted to \$5.6 billion. [Another](#) found that the Canadian Pension fund would have gains \$7 billion with divestment between 2012-2015.

2c. Disclosure of coal-specific losses

Disclosure of coal-based losses for the entire fund is particularly appropriate for the following reasons:

- *Losses were a surprise:* Contrary to the mantra of slow change, the speed with which coal-based losses occurred may be a harbinger of change in the oil sector – indeed, for the sake of the climate, we should hope they are.
- *Non-cyclical losses:* the consensus view is increasingly that the coal industry is in terminal decline, setting aside the idea that temporary market dips will reported on as losses.
- *Major funds have divested:* As coal stocks were declining some of the world’s largest funds, such as Norway’s sovereign wealth fund, [divested](#) from coal, and set standards for including utility companies that earn a certain portion of their profits from coal.
- Using standards set by others, a similar approach can be applied to equities disclosure.

3. Standardized climate risk assessment and reporting

Outside of divestment, financial climate risk assessment is increasingly mainstream, and has been undertaken by the world’s biggest fund, [Blackrock](#), and the Bank of England. As a result, organizations which facilitate analysis and standard practices are emerging for the conducting of comprehensive risk analysis – this goes far beyond the “top 200”.

We suggest the adoption of the [*Taskforce for Climate-related Financial Disclosure*](#) (TCFD), which has supporters from across the banking and insurance industry. Other approaches involve scenario analysis, such as comparisons to low carbon portfolios, or stress testing for sudden declines in the oil industry – like those seen in coal – as well as scenarios where the world keeps to the 2°C-warming limit.

APPENDIX C - SELECT COMMENTS FROM THE CHANGE.ORG PETITION

Select comments from the change.org petition: [University of Waterloo - divest fossil fuels and invest in a greener future](https://www.change.org/p/university-of-waterloo-divest-from-fossil-fuels-and-invest-in-a-greener-future)³¹

This is a great opportunity for the University to seek out innovative ways to invest in the low-carbon economy. Become a leader in supporting and developing green finance.

In harmony with truth! I want to see my UW take this innovative choice that supports all our futures. This is academic institution educates and conducts research for the betterment of humanity. Please make the decision to divest - act thinking about the generations to come.

As an alumnus of Environmental Studies I am disappointed that the university is not showing better leadership on this urgent issue.

Divestment allows the University of Waterloo to make clear its priority for evidence based decision making, while also giving climate activists a bigger stick to walk with.

Since it's a university, let's assign a logic exercise for our investment strategists: If we don't divest, either we don't toast the planet and lose money on stranded assets, or we make money but toast the planet. Derive the conclusion: we must divest.

I'm signing because I want my University to uphold the worth of our planet and accelerate change. The status quo is not good enough.

Because, "if it's wrong to wreck the planet, then it's wrong to profit from that wreckage."
- Bill McKibben

It's morally reprehensible for a university to be funding climate change by investing in fossil fuels, and it makes absolutely no financial sense either! UW should be an agent of change, a climate leader and responsible investors in a safe future for their students now and for generations to come!

It is important that the university act on such an important issue. There are no arguments left, financial or moral, to justify investing in fossil fuels.

As a public university of the highest calibre, it is crucial that UW's policies and actions align with our scholarly work; both must be for the greater good of the planet and its inhabitants.

³¹ <https://www.change.org/p/university-of-waterloo-divest-from-fossil-fuels-and-invest-in-a-greener-future>