

Briefing Document

Prepared for the University of Guelph Board of Governors

Prepared on behalf of:



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Fossil Free Guelph is a group of students, faculty, staff, and alumni at the University of Guelph that are committed to advocating for meaningful action on climate change. If you would like to comment on this paper, please e-mail us.

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1. OUR CASE IN BRIEF

Humanity confronts the grave and urgent crisis of climate change. The evidence is clear that we are moving into a future that is dangerous for humankind. Immediate actions are required. Hence, we are asking for the University of Guelph to immediately forgo further investments in fossil fuel companies, and divest from all existing fossil fuel holdings within five years. Action on climate change requires a rapid transformation of our energy system away from fossil fuels, and divestment can help promote this. In this paper, we will draw upon the University of Guelph's official vision and mission statement shown in Figure 1.

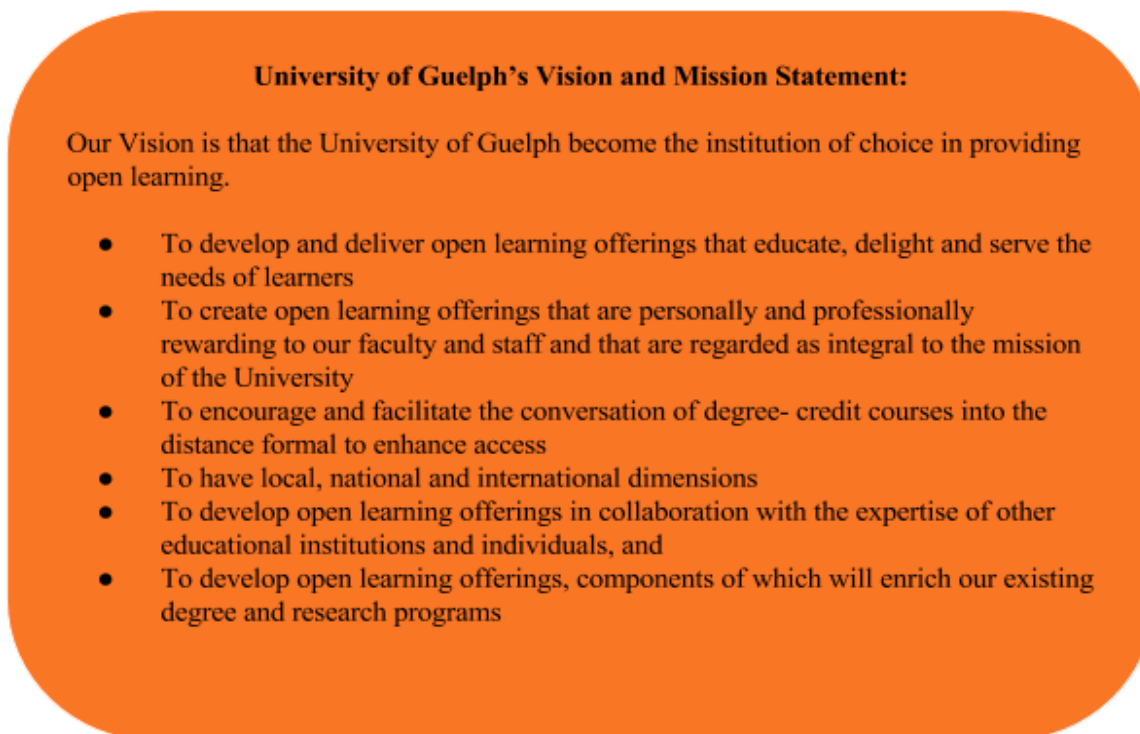


FIGURE 1- RETREIVED FROM THE UNIVERSITY OF GUELPH WEBSITE

As a university institution dedicated to “cultivating the essentials for our quality of life - water, food, environment, animal and human health, community, commerce, culture and learning”, the University of Guelph should not continue to financially benefit from the climate and ecological destruction caused by fossil fuel extraction. By investing its

endowment and pension funds in the fossil fuel industry, the UoG is contributing to the corrupted politics associated with the fossil fuel industry, including campaigns that mislead the public about climate science, as well as efforts to block, dilute, or delay the adoption of meaningful climate policies. Given UoG's commitment to learning and research, continued support of the fossil fuel industry does not align with its goals as an academic institution.

Although some are concerned that divestment might impact the current income that UoG receives from the endowment fund, we argue that will not necessarily be the case. Studies designed to measure the impact of divestment have found little or no impact on returns. There are many opportunities in the market for an endowment to make equivalent or greater returns on investment. With increasing concerns regarding the "carbon bubble", there are ongoing financial risks to investing in fossil fuels. By investing money in oil, gas and coal companies, there is an assumption that these fuels will be extracted at some point in the future. However, there are multiple reasons why these fossil fuels may not, and should not, be extracted.

The amount of green house gases that would be emitted into the atmosphere, if these reserves are to be extracted and burned, would push the climate well past the limits set by the Intergovernmental Panel on Climate Change (IPCC). As a result, divestment is consistent with UoG's duties as a trustee. We call on UoG to use the endowment as a living laboratory: to design a profitable fossil free portfolio, and use it as a model to inspire sustainable investment at other institutions. This action strongly aligns with the university's stated dedication to building "a profound sense of social responsibility" and "an obligation to address global issues," while its current investment program does not. We recognize this will be a complex and challenging task, which is why we have included a five-year timeline for full divestment. While, again, some are concerned divestment may hurt the university's ability to raise money, divestment could actually help UoG attract additional donations by demonstrating a strong commitment to sustainability and becoming a global leader in combating climate change.

Although it is commonly believed that we need fossil fuels to live and thrive - which is true in the short term - we advocate a shift to a clean energy economy; something engineers, scientists, and economists have called achievable, practical, and affordable. By divesting, UoG can show leadership in fostering this necessary transformation and demonstrate its commitment to sustainable, long term change.

Some have questioned the efficacy of divestment as a strategy. We argue that beyond highlighting the fossil fuel industry's role in perpetuating carbon pollution and political distortion, divestment can reduce fossil fuel companies' stock prices, pressuring them to shift their investment toward producing clean energy, such as wind and solar power. A single divestment campaign will not make a difference; that is why we are part of hundreds of fossil fuel divestment campaigns across North America and Europe. Historically, divestment efforts played a major role in building the international campaign to end apartheid in South Africa. In this way, divestment has shown its utility for social change. In light of UoG's reputation for sustainability and its claimed dedication to cultivating ecological health, the time has come for the university to take the next step and put its ideals into practice.

2. THE ALARMING SCIENTIFIC REALITY OF CLIMATE CHANGE

There is overwhelming scientific consensus that climate change is happening, and that it is caused by anthropogenic greenhouse gas emissions. The 2013 report by the Intergovernmental Panel on Climate Change calls the evidence of global warming "unequivocal," and the evidence that the dominant cause is anthropogenic emissions "extremely likely," which they define as 95% probability.¹ The consensus within the scientific community is indicated by comprehensive reviews of the scientific literature, which showing 97% of peer reviewed science papers on the issues agree that anthropogenic emissions are causing global warming,² Polls of scientists,³ and public statements by many scientific communities offer further confirmation.⁴ There is a scientific consensus that the effects of climate change are already being felt, and that they

will worsen significantly, in the future, if we do not act quickly and dramatically to reduce the emissions of greenhouse gases. The concept of the 'tipping point,' which is fast approaching should our economies remain fossil fuel dependent, is explained in Figure 2.

The list of already observed impacts of climate change is substantial:

- Arctic sea ice is declining dramatically and the rate of decline is accelerating.
- The melting of the Antarctica and Greenland ice sheets is accelerating, and glaciers continue to melt rapidly.
- Sea levels are rising, increasing the rate of coastal flooding and risk of storm surges.
- The risk of wildfire has increased in many places.
- The frequency and severity of some types of extreme weather events is increasing. There is strong evidence that heat waves, heavy rainfall events, droughts, and extreme sea levels have all already increased in some regions as a result of climate change.
- The planet's ecological systems have been disrupted. Marine and terrestrial species are moving up in latitude and elevation. The seasonal behaviors of various species are changing, which increases the risk of extinction. In Western North America, and especially British Columbia, we have already experienced harsh impacts on our forest ecosystem from the warming-facilitated mountain pine beetle epidemic.⁵
- The oceans, having absorbed 30% of anthropogenic carbon dioxide, are acidifying.
- Impacts on shellfish and coral reefs have already been detected.⁶

Tipping Point

A period of fast, extreme change that is difficult or impossible to reverse once it starts. For example, imagine a glass of water slowly tipping over: At first, as it starts tipping, nothing happens. But once it passes its tipping point, the glass suddenly falls over and all the water spills out. Once that happens, there's no way to get the water back in the glass.

Climate tipping points are major events. For example, in the summer of 2012 almost half of the sea ice in the Arctic melted, an event that shocked climate scientists. **Just a few years ago, scientists estimated it would take 80 years before the Arctic sea ice would melt completely – now they say it could happen this year.**

¹ Other human activities also release CO₂ into the atmosphere in other ways, including cutting down trees and tilling soil.

² According to NASA climate scientist Jim Hansen and others.

FIGURE 2 - DEFINITION OF THE 'TIPPING POINT' CONCEPT

- Crop yields are suffering. According to the IPCC, the “negative impacts of climate change on crop yields have been more common than positive impacts (high confidence).”⁷
- Climate change can directly and indirectly affect human health. The IPCC states that, as a result of increased heat waves, altered infectious disease vectors and seasonal distributions of allergenic pollen, “there has been increased heat-related mortality and decreased cold-related mortality in some regions as a result of warming (medium confidence).”⁸ The World Health Organization estimates climate change could already have caused more than 150,000 deaths per year.⁹

The scientific community also has a significant amount of confidence that without dramatic reductions in our greenhouse gas emissions, temperatures will rise to levels that will create far more dangerous impacts. If we remain on the current trajectory, climate models predict a warming of 2.6 to 4.8 °C (in addition to the 0.8 degrees already observed) by the end of this century. As the IPCC Working Group II’s latest report demonstrates, the impacts of such levels of warming on future quality of life are daunting. Some of the central points of this report are listed in Figure 3.

- Elevated risks of death, injury, ill-health, or disrupted livelihood in low-lying coastal zones.
- System risks due to extreme weather events leading to breakdown of infrastructure networks.
- Risk of food insecurity and the breakdown of food systems linked to warming, drought, flooding, and participation variability and extremes, particularly for marginalized populations.
- A large fraction of both terrestrial and freshwater species face increased extinction risk.
- “Climate change can indirectly increase risks of violent conflicts in the form of civil war and inter-group violence by amplifying well-documented drivers of these conflicts such as poverty and economic “shocks.”¹¹

FIGURE 3 - IPCC WORKING GROUP II - REPORT HIGHLIGHTS

3. THE HARSH REALITY OF THE GLOBAL CARBON BUDGET

The growing scientific evidence about the impacts of climate change is alarming. There is general agreement among experts about what needs to be done to avoid dangerous climate change, which the international community has agreed upon in the 2009 Copenhagen Accord; the goal of staying within 2°C of warming. The concept of a “carbon budget” has emerged over the past five years to characterize the amount of additional greenhouse gases humanity can afford to release and remain within a certain temperature threshold for warming. It is a matter of calculation to determine how much additional greenhouse gas pollution can be released.¹² The concept, illustrated in Figure 4, has been embraced by leading international organizations such as the International Energy Agency,¹³ and, recently, by the IPCC in its Fifth Assessment Report from Working Group I.¹⁴

There is widespread consensus that the overwhelming majority of carbon in global energy reserves needs to remain in the ground in order for humanity to have a reasonable probability of staying within the 2°C threshold. While there are differences in estimates depending on, among other things, the time frame, the metric used, the temperature target, and the probability of reaching that target, humanity can only “afford to burn” 30-39% of the remaining carbon reserves on the planet.¹⁵ In other words, 61-70% of the world’s fossil fuel reserves are “unburnable” if we want to avoid dangerous climate change.

This carbon budget concept has direct implications for the long term financial viability of the fossil fuel industry. Fossil fuel reserves are included in today’s valuation of fossil fuel companies, and the idea that we cannot afford to burn most of them is a major risk to the long term profitability of the industry and a major financial risk to investors. This risk of stranded assets and the so-called “carbon bubble” is getting increasing attention from investors around the world¹⁶.



4. A CLEAN ENERGY FUTURE IS FEASIBLE AND AFFORDABLE

In addition to the growing and alarming consensus on climate change and the severe constraints of a global carbon budget, there is also an emerging agreement that a transformation to a clean energy system is technologically feasible and economically affordable.¹⁸ Because the current energy system has been constructed upon prices that externalize the costs of climate damage, it is likely that a clean energy system will be somewhat more expensive than the unreasonably subsidized status quo. However, virtually, every estimate of the costs of a clean energy future suggests that, given the risks of climate change, the increase in costs is affordable. According to Yale University economist William Nordhaus, the costs of greenhouse gas mitigation designed to reach the 2°C target temperature “would take between 1 and 2 percent of world income on an annual basis.”

A research group studying the California energy system concluded that through a combination of energy efficiency improvements, decarbonization of electricity generation, and electrification of energy services, California could reduce its carbon emissions 80% by 2050. The study concluded that the cost of the transition in 2050 would amount to \$1200 per capita or 1.3% of gross state product.¹⁹

Stanford’s Mark Jacobson has produced extensive research on the feasibility of a clean energy future. His global analysis (with Mark Delucchi) concluded that it would be feasible to deliver the new energy required to fuel population and economic growth by the year 2030 exclusively with a combination of wind, water, and solar energy. All global energy services could be produced by wind, water, and solar in 2050. Their analysis concludes that “barriers to the plan are primarily social and political, not technological or economic. The energy cost in a [wind, water, and solar] world should be similar to that today.”²⁰ Jacobson has also produced a clean energy conversion scenario for New York State, which shows the state could move to wind, water, and solar completely by 2030, and electricity costs would actually be cheaper than under a fossil fuel future.²¹ More recently, Jacobson has teamed up with others to produce roadmaps for each of the 50 states.²²

5. DIVESTMENT: THE RIGHT ALTERNATIVE

Among experts and advocates for a safe climate, there is widespread consensus that placing an economy-wide price on carbon is the best approach to reducing greenhouse gas emissions, so that economic transactions incorporate the full costs to society.²³ Up to this point, however, the political process is failing us in North America. After the US House of Representatives adopted a cap and trade bill in 2009, opposition in the super-majoritarian US Senate killed the bill, taking legislative efforts to adopt climate policy off the table. Canada's current Prime Minister has made a career of mocking efforts to put a price on carbon as a "tax on everything" and has stalled the introduction of regulations to address Canada's greenhouse gas emissions. Some subnational jurisdictions have enacted bold policies, including California and British Columbia. Despite the best efforts of climate activists, however, legislative initiatives have stalled, in no small part due to opposition and obfuscation by the fossil fuel industry.

In the wake of political stalemate on the climate crisis, the fossil fuel divestment movement has emerged to press for action. Citizens are taking responsibility for their own institutions, pressuring universities and other institutional investors to live up to their principles and stop profiting from climate destruction. Divestment campaigns have emerged at hundreds of universities and other institutions around the world. So far several small US universities have committed to divestment, as well as numerous prominent religious organizations, philanthropic foundations, and municipalities. While Stanford recently committed to divesting from coal companies, no major globally-ranked research university has decided to divest from fossil fuels completely. We believe UoG has an enormous opportunity to demonstrate global leadership on sustainability by being the first major research university to commit to fully divestment.

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- "I reject the suggestion that a policy against divestment will perpetuate injustice, since I see no realistic possibility that having universities sell their stock in American companies will make a noticeable contribution to ending apartheid."
- "Is divestment a more effective way of inducing companies to withdraw than voting in favour of corporate resolutions to withdraw? There is no evidence to indicate that this is so".
- "Harvard decided on this course of action in the conviction that... voting and communicating views are appropriate forms of behaviour for a university while efforts to exert pressure through boycotts and divestment are not".

The divestment movement is inspired by the anti-Apartheid movement of the 1980s. The impact of the anti-Apartheid investment campaign was less on the valuation of companies doing business in South Africa than on how it altered the political climate on relations with the racist South African regime. The divestment campaign, which began at universities and religious institutions, had the effect of stigmatizing firms doing business in South Africa. This stigmatization ultimately hurt the brand and credibility of these firms in the marketplace, and just as importantly created the political space for legislative changes like the U.S. Anti-Apartheid Act of 1986, which imposed sanctions on South Africa.²⁴

The theory of change underlying the fossil fuel divestment movement is based on similar logic. The political resistance to climate action has been fueled to a large degree by the aggressive lobbying of the fossil fuel industry, which has deliberately misled the public about the scientific consensus on climate change and sought to block, dilute, and delay the adoption of effective climate policies.²⁵ The purpose of the divestment movement is to highlight the need for urgent action on climate change, delegitimize the fossil fuel industry and its stubborn resistance to change, and create the political space

for policymakers to adopt meaningful policies to foster a rapid transition to a clean energy future.

There is a great deal of concern that fossil fuel divestment will hurt the performance of the UoG endowment but that need not be the case. If the market is working reasonably efficiently, then we can expect non fossil-fuel investments to offer similar returns to fossil fuels, and the only impact on the endowment is a small reduction in its diversification and a corresponding small increase in risk. Several studies have looked into the impact of divestment on university endowments.

A study by S&P Capital IQ found that divesting 10 years ago would have *increased* an endowments' returns, compared to remaining invested in fossil fuels.²⁶ This is not to say that divesting today will certainly increase future returns, only that the impact of divestment is hard to predict. It may be beneficial, it may not be. In both cases, the impact is not expected to be significant. The Aperio Group analysis found that, as expected, divestment slightly increased the portfolio's risk, with only a small 0.0034% impact on the returns, concluding that "screening [divestment] negatively affects a portfolio's risk and return, but it also shows that the impact may be far less significant than presumed."²⁷ A limited impact on returns is not hard to understand. UoG's fossil fuel investments are large, but 90% of the endowment is invested elsewhere. With divestment, one option would be to simply invest more in that mix of non-fossil fuel assets. As a result, divestment should not be inconsistent with UoG's fiduciary duty.

Some would prefer UoG to maintain ownership and exercise leverage as a shareholder. While shareholder activism is preferable to no action at all, it is an insufficient response to the climate crisis for three reasons. First, because the business model of fossil fuel companies is so reliant on carbon reserves that humanity can't afford to burn, working through shareholder channels is inadequate to have the transformative effect required. Second, the fact that most of UoG's equity holdings are in pooled funds makes the exercise of shareholder influence both more challenging and less significant. Finally, and most importantly, these are urgent times that demand rapid and significant changes in our

energy system, and we believe those changes would be better fostered through the more dramatic action of divestment.

6. THE CARBON SHADOW AND UOG'S ENDOWMENTS

The UoG endowment, as of 2012, has a value of \$228 million. It is challenging to determine what fraction of the endowment is invested in fossil fuel companies because the securities within many ETFs and other pooled funds are often obscured. UoG's endowment statement directly reports investments in fossil fuel companies of about \$34.2 million, but a much larger fraction of the campus endowment is in fossil fuel companies that are part of larger pooled funds. By examining the annual reports issued by investment funds receiving UoG financial capital, we estimate that at least 10-15% of the campus endowment is invested in fossil fuel companies. We are pleased to see UoG's increasing interest in applying environmental, social, and corporate governance principles to its investments. But we are calling upon the university to target the holdings of fossil fuel companies specifically. UoG's own commitments to aggressively cut our on-campus greenhouse gas emissions are laudable, but the embodied emissions in the endowment are an order of magnitude larger than on-campus emissions.

7. UNIVERSITY OF GUELPH'S MORAL IMPERATIVE

We are proud of the University of Guelph for its strong commitment to sustainability as demonstrated by the establishment of the sustainability office and its commitment to the 'Better Planet Project'. By opening up a sustainability office focusing on emission reduction targets, and adopting ambitious future greenhouse gas reduction targets, UoG has shown initiative and innovation in becoming a more environmentally conscious institution.³¹ However, as we face the gravity of the climate crisis, including its threat to the future well-being of the university community, this is not enough.

Clearly, the endowment fund cannot live up to the sustainability mantra when it is invested in an industry that is such a direct threat to the well-being of future generations. It is wrong for UoG to continue to profit from its investments in an industry that contributes so severely to perpetuating dangerous climate change. Inadvertently supporting such a destructive industry is inconsistent with UoG's core values of sustainability, leadership, and innovation. If it is wrong to destroy our planet, then it is wrong to profit from doing so.

UoG's Sustainability Office aims to foster an institutional culture of sustainability, as well as empower individuals to take part in the university's commitment to practicing institutional ecology. These two goals are tenets of the Talloires Declaration, to which the University of Guelph is a signatory member. The Talloires Declaration states that "urgent actions are needed to address these fundamental problems and reverse the trends. Stabilization of human population, adoption of environmentally sound industrial and agricultural technologies, reforestation, and ecological restoration are crucial elements in creating an equitable and sustainable future for all humankind in harmony with nature." This statement that was endorsed and signed by the UoG. Moreover, as shown in Figure 5, the document outlines ways in which the University of Guelph committed to taking urgent actions.

The University of Guelph is also a member of the Association for the Advancement of Sustainability in Higher Education (AASHE). AASHE's vision is to see higher education take a leadership role in preparing students and employees to achieve a just and sustainable society by creating campuses that serve as models for sustainability, with curriculum and operations reflecting an integrative approach to learning and practice.

As a prominent and well-respected institution, UoG has the opportunity to demonstrate its leadership and innovation by divesting from fossil fuels. Anthropogenic climate change is creating a tumultuous future for our planet and its people; divesting would put us ahead of that curve. We would be making a moral statement that profiting from the fossil fuel industry is wrong. By being the first major university to fully divest from fossil fuels, we can fulfil our aspirations for global leadership on sustainability. By

demonstrating the success of a fossil free portfolio, we can inspire other institutions to follow suit, and contribute to the social and political change necessary to avoid dangerous climate change. Given UoG's commitments and the gravity and urgency of the climate crisis, fossil fuel divestment is the next logical step for UoG's Sustainability Initiative; it's the right thing to do.

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