Fossil Fuel Divestment: Review and Analysis of Options for McMaster University

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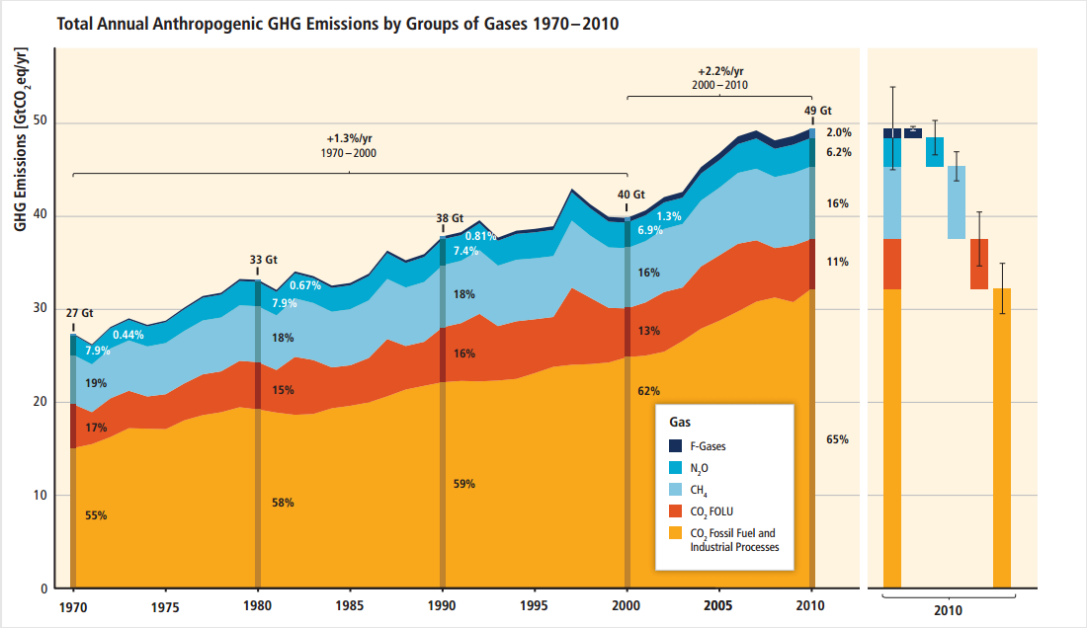
August 16, 2016
Catherine Chisholm
Office of the Provost, McMaster University

Significant and valuable input has been received from:
Provost and Vice-President (Academic) Dr. David Wilkinson
Assistant Vice-President (Administration) and Chief Financial Officer Deidre Henne, CPA, CA
And members of the President's Advisory Committee on Fossil Fuels Divestment

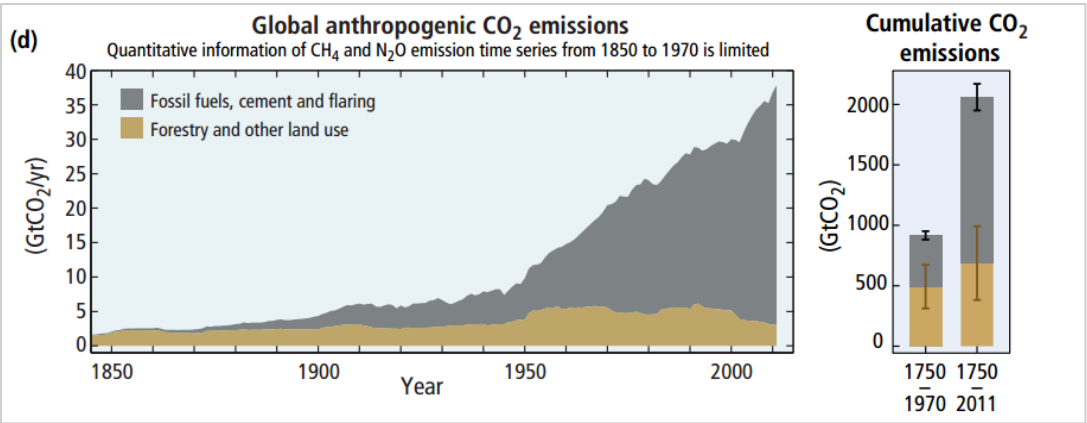
Executive Summary

What is divestment, and why divest?

McMaster University and hundreds of other universities, local governments, professional associations and non-profit organizations around the world are facing the question of whether to sell (divest) their investments in fossil fuel companies. Students and professors have been at the forefront of the global 'fossil free' movement, urging large institutional investors to align their investment practices with their values. The motivation for divestment is primarily ethical: there is significant harm to human health and the environment caused by the extraction and use of the fossil fuel industry's products. Coal, gas and oil produce the majority of climate-warming carbon dioxide emissions:



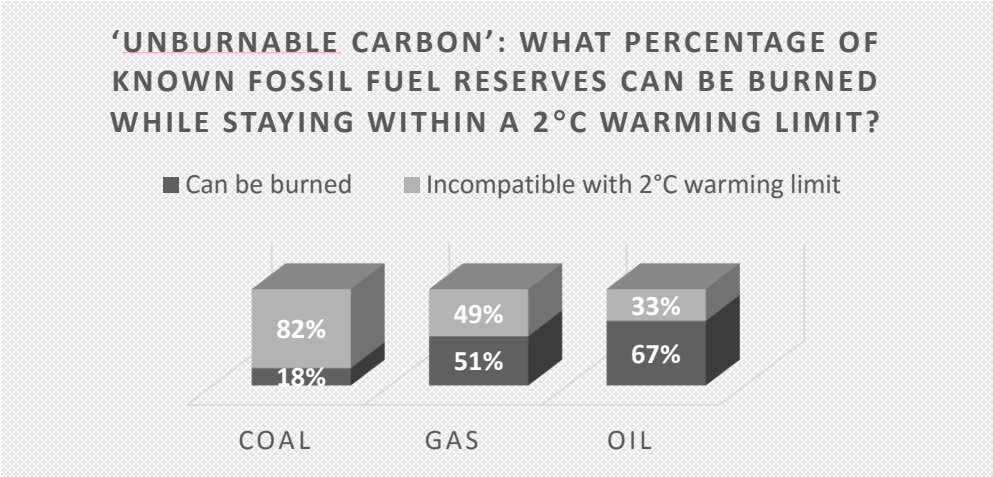
Greenhouse gas emissions by source, 1970-2010 (IPCC 2014, 5)



Carbon dioxide emissions by source, 1850-2011 (IPCC 2014, 3)

The harms of climate change are well documented in academic journals and Intergovernmental Panel on Climate Change (IPCC) publications; the most recent report names species extinctions, increasingly severe droughts and storms, increased health risks from heat extremes and changing disease vectors, and risks to water availability and food production (IPCC 2014, 10-16) as projected effects of climate change.

Apart from their role in supplying the fuels that are driving anthropogenic climate change, fossil fuel companies have also been criticized for polluting local environments in the extraction process, promoting climate misinformation, and continuing to pursue new extraction projects without regard for the environmental damage caused. Although keeping global warming within two degrees Celsius of pre-industrial levels (the 2°C international target) would mean that a large proportion of currently known fossil fuel reserves could not be burned, fossil fuel extraction companies continue to explore for more resources.



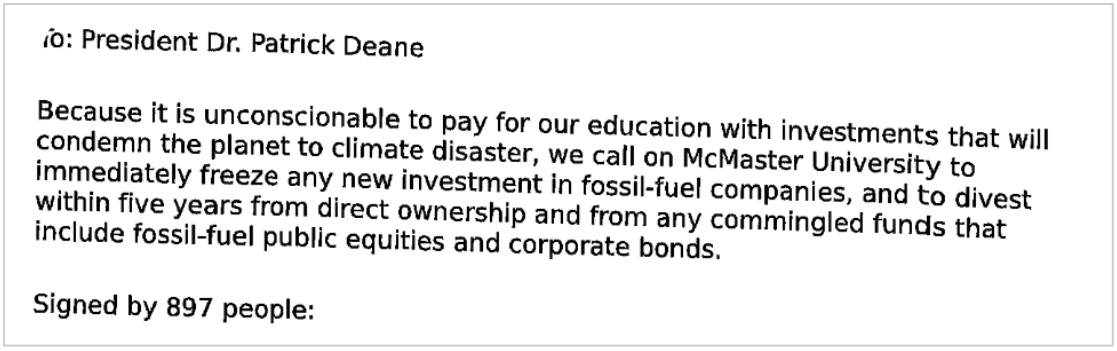
(Image based on data from McGlade and Ekins 2015, 189)

Financial risks of continuing to invest in the industry are sometimes also cited as a reason to divest: governments may re-regulate the industry (or remove subsidies, or raise the price on carbon emissions), demand for fossil fuels may decrease as other energy sources become more competitive, and reserves cannot last forever.

The response to this campaign has generally not challenged the existence of these harms. Instead, opponents argue that *demand* for fossil fuels should be targeted, not the supply side, or that the harms produced by fossil fuel use are outweighed by the social benefits of having an energy source to power transportation and other needs. Some also point out that there is a high bar for establishing agreement to divest on ethical grounds, since views vary within the university community.

Many universities, including McMaster (see Appendix A), have 'social responsibility and investment' policies that permit divestment from certain industries, companies or governments for ethical reasons. To date, no Canadian universities have chosen to divest from fossil fuels. Hundreds of institutions have done so globally, but the definition of divestment varies and some have chosen to divest only direct holdings, not indirectly held funds. McMaster's investments are virtually all indirect, and its total level of exposure is currently 4.3% of the $836.2 million endowment fund pool.

Instead of divestment, the majority of Canadian universities have chosen to implement 'ESG' screening, which is ongoing monitoring of the 'environmental, social and corporate governance' performance of all investment holdings. This report also explores ESG as an option – McMaster has already applied it since 2013, but standards are still developing. ESG can be combined with divestment, where all investments are screened but special restrictions are placed on certain companies or industries. Additional actions could include partial divestment (from coal and oil sands, the most polluting fossil fuels), creating a new investment fund focused on renewable energy, increasing research funding in energy and climate science areas directly, or other non-investment-related actions.

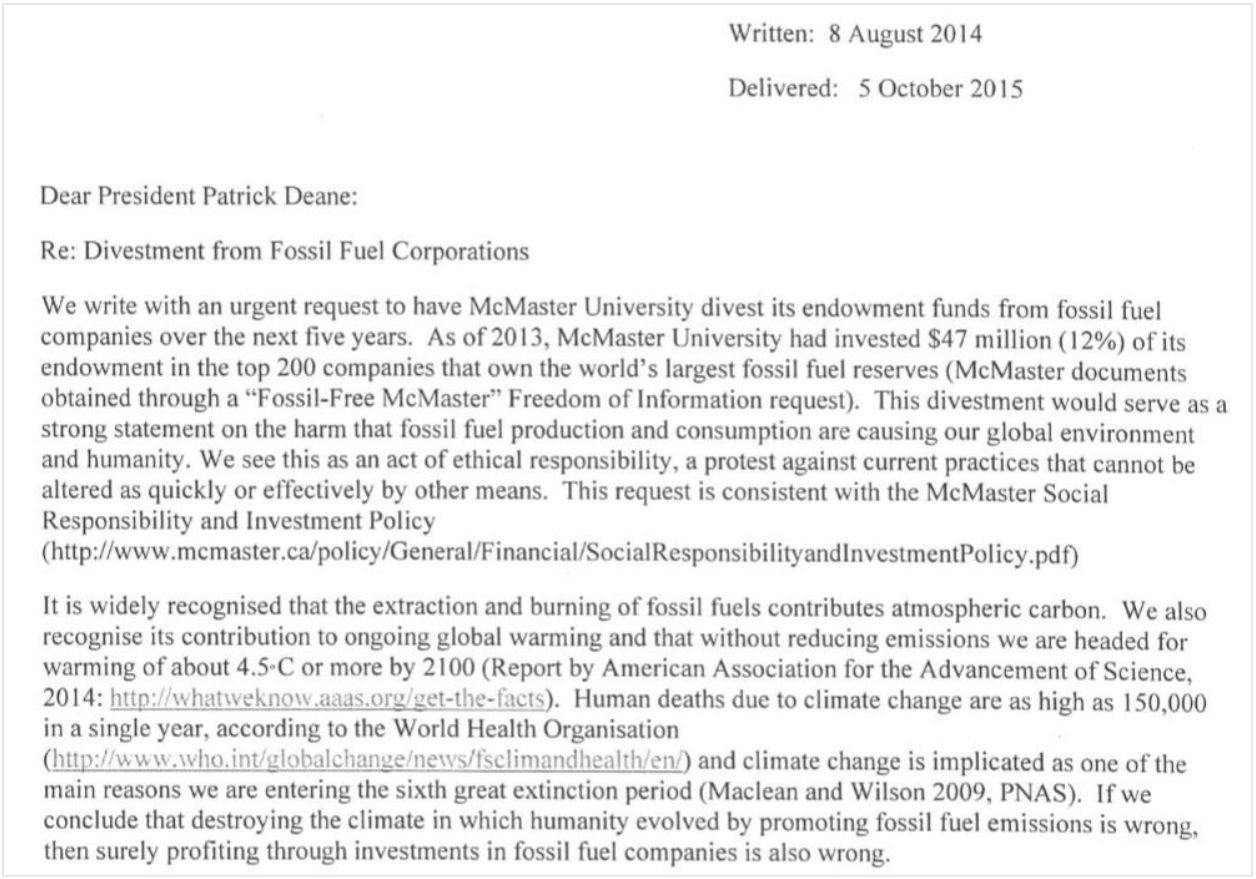


To: President Dr. Patrick Deane

Because it is unconscionable to pay for our education with investments that will condemn the planet to climate disaster, we call on McMaster University to immediately freeze any new investment in fossil-fuel companies, and to divest within five years from direct ownership and from any commingled funds that include fossil-fuel public equities and corporate bonds.

Signed by 897 people:

Text of student petition



Written: 8 August 2014

Delivered: 5 October 2015

Dear President Patrick Deane:

Re: Divestment from Fossil Fuel Corporations

We write with an urgent request to have McMaster University divest its endowment funds from fossil fuel companies over the next five years. As of 2013, McMaster University had invested $47 million (12%) of its endowment in the top 200 companies that own the world's largest fossil fuel reserves (McMaster documents obtained through a "Fossil-Free McMaster" Freedom of Information request). This divestment would serve as a strong statement on the harm that fossil fuel production and consumption are causing our global environment and humanity. We see this as an act of ethical responsibility, a protest against current practices that cannot be altered as quickly or effectively by other means. This request is consistent with the McMaster Social Responsibility and Investment Policy (http://www.mcmaster.ca/policy/General/Financial/SocialResponsibilityandInvestmentPolicy.pdf)

It is widely recognised that the extraction and burning of fossil fuels contributes atmospheric carbon. We also recognise its contribution to ongoing global warming and that without reducing emissions we are headed for warming of about 4.5◦C or more by 2100 (Report by American Association for the Advancement of Science, 2014: http://whatweknow.aaas.org/get-the-facts). Human deaths due to climate change are as high as 150,000 in a single year, according to the World Health Organisation (http://www.who.int/globalchange/news/fsclimandhealth/en/) and climate change is implicated as one of the main reasons we are entering the sixth great extinction period (Maclean and Wilson 2009, PNAS). If we conclude that destroying the climate in which humanity evolved by promoting fossil fuel emissions is wrong, then surely profiting through investments in fossil fuel companies is also wrong.

Text of faculty petition (partial; see Appendix B for full text)

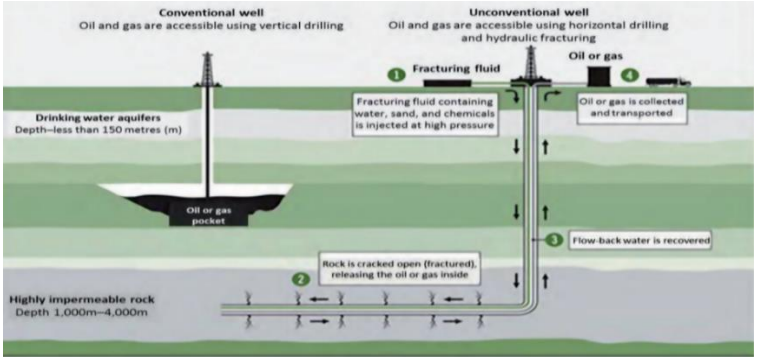
Section 1: Arguments about Divestment

The ethical argument

The argument for fossil fuels divestment is primarily a moral argument: "If it's wrong to wreck the climate, then it's wrong to profit from that wreckage" (McKibben and Naidoo 2013). Fossil fuel extraction companies are targeted as unethical because using their products results in carbon dioxide emissions, which contribute to global warming. Both global climate change and local pollution from the extraction and burning of fossil fuels cause human health harms and environmental damage.

The threshold for a 'dangerous' level of global warming is disputed (Knutti et al. 2016) but international commitments have been made to keep warming within 2°C of the pre-industrial baseline, with some experts favouring a 1.5°C target. The planet is already at about 0.8°C above this pre-industrial level (IPCC 2014), and the vast majority of climate scientists agree that this warming is caused by human activity in addition to natural cycles (Crowley 2000; Cook et al. 2015). The dangers of climate change at higher levels such as 4° or 6°C by 2100 are well documented and include species extinctions, sea level rise and glacier melting (forcing human resettlement), changing disease vectors, changing hydrological cycles, disruption of food production, and increased severity of storms, heatwaves and droughts (IPCC 2014; World Health Organization 2014; Knutti et al. 2016).

The ethical argument against fossil fuels companies is that their business model rests on continuously extracting coal, gas and oil at levels that are incompatible with a 2°C warming limit. They currently hold approximately five times the level of hydrocarbons that, if burned, would be compatible with this target: the world's remaining 'carbon budget' has been estimated at 565 gigatons of carbon dioxide, and as of 2012 the top 200 publicly traded fossil fuel companies and national fuel companies held reserves that would yield five times as much: 2795 gigatons (McKibben 2012; the Top 200 list of fossil fuel companies is available publicly at http://fossilfreeindexes.com/research/the-carbon-underground/). Broken down by fuel type, an estimated 82% of coal, 49% of gas and 33% of oil would need to remain unburned in order to remain within the 2°C warming limit (McGlade and Ekins 2015, 189). Despite the fact that burning currently known reserves would likely lead to dangerous levels of warming, fossil fuel companies are continuing to explore and develop new reserves – this is seen as unethical behaviour. Contravening local laws or causing health harms through localized pollution (such as water contamination) and emissions during the extraction process are also cited as socially harmful actions by divestment campaigners.



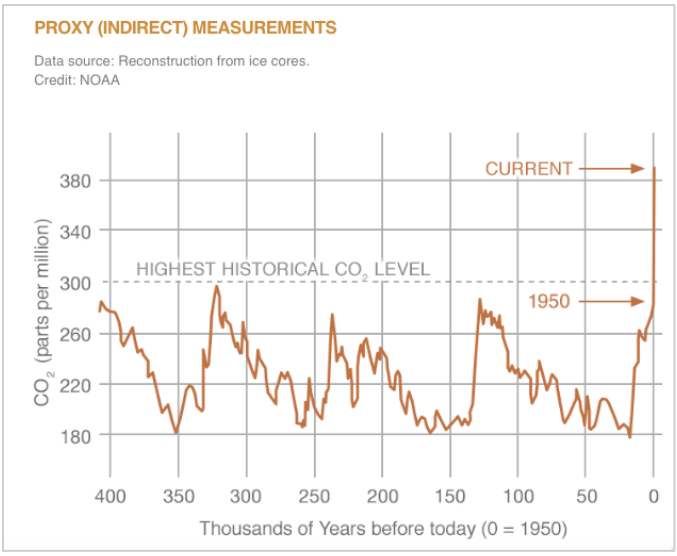
Conventional oil extraction compared to hydraulic fracturing (Ward et al. 2016, 58).

Responses to ethical arguments

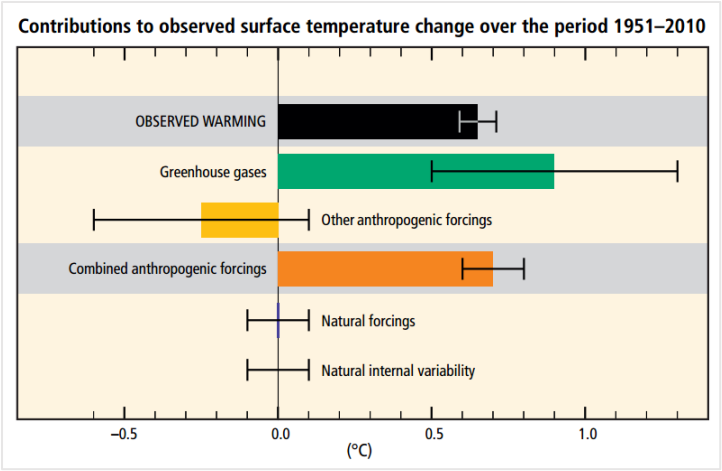
Institutions that have chosen not to divest have generally agreed that climate change is a major threat to human societies. However, many universities have rejected divestment. Some have done so on financial grounds or because of doubts about the effectiveness of divestment. From an ethical perspective, universities have argued:

- *Universities should not make political or ethical statements with their investments*, because they are a financial resource and because opinions vary within the university community (Harvard decision, Faust 2013). However, the existence of 'social responsibility and investment' policies at most universities implies that in some cases, divestment on ethical grounds may be justified. Proof of a high level of 'social injury' caused by the firms in question and a high level of community support for divestment are often the criteria used (Simons et al. 1972).
- *Fossil fuels are currently widely used and therefore they provide social benefits that outweigh their harms* (McGill decision, 2016). Developing countries in particular would especially suffer from any bans or higher pricing of carbon, as coal and other non-renewable fuels make up a large part of poorer countries' energy mixes. In response, some have pointed out that climate change effects would also disproportionately harm developing countries.
- *Divesting from the supply side of fossil fuels is unjustified when the real problem is demand* (Derochers and Shimizu 2016; McGill decision). In this view, individuals and organizations should reduce their own demand for fossil fuel products, which would have a greater effect. (Divestment has virtually no financial impact because the companies rely primarily on product sales, not investment). However, others see targeting the supply side of the emissions problem as more appropriate than reducing demand across all sectors (McKibben 2012): in this view a total transformation of the energy system is needed, not piecemeal efficiency improvements. Others point to additional 'unethical' actions perpetrated by fossil fuel extractors, such as misinformation campaigns, breaking local laws and safety regulations or causing local ecosystem damage and health harms (oil spills, chemical pollution of aquifers, air pollution) during the extraction process.
- *Shareholder activism is a better solution*. Replacing 'responsible' investors with amoral ones undermines the possibility of changing company actions through shareholder engagement. Shareholder engagement is often named as an alternative to divestment, although it has its critics as well (see Section 2 for more discussion).
- *Divesting is hypocritical when universities still use fossil fuels*. Divesting without reducing campus carbon emissions and fossil fuel use is seen as hypocritical by some administrations.
- *Divestment distracts from 'real' climate change solutions* (MacAskill 2015), making people feel as if the emissions problem has been addressed when simply moving funds does not resolve it. This may be true but supporters think the movement can increase public awareness and concern (McKibben 2013), and that reinvesting in different industries could have an impact.

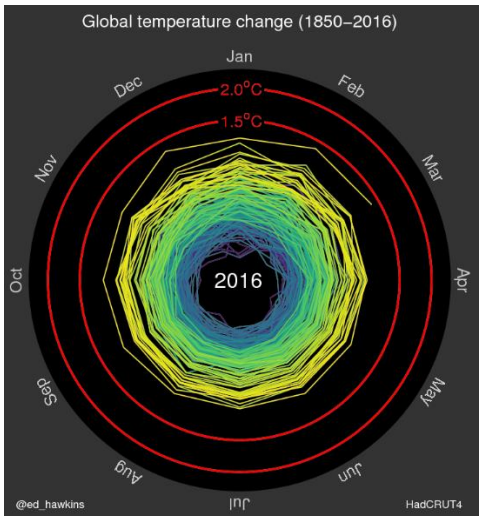
Comparing the 'fossil free' movement to previous divestment campaigns (against the apartheid regime in South Africa, tobacco, and more – see Appendix C), fossil fuels are most similar to tobacco in that there is scientific evidence of the harms caused by the industry's product. There are measurable human health and environmental harms involved – unlike more politically focused campaigns (country boycotts) where views of egregious human rights offenses are more subjective and varied. Fossil fuels may even be worse than tobacco because of the global and intergenerational impacts. However, fossil fuels are considered to have more social benefits than tobacco because they currently fulfil a societal need for energy, transportation and goods. A transition to different energy sources is possible but would take time and significant change.



Carbon dioxide levels in the atmosphere have now exceeded historical peaks (World Economic Forum 2016)



Global average temperatures have already increased (IPCC 2014, 6)



Recent years have broken temperature records (Hawkins 2016)

Effectiveness of divestment

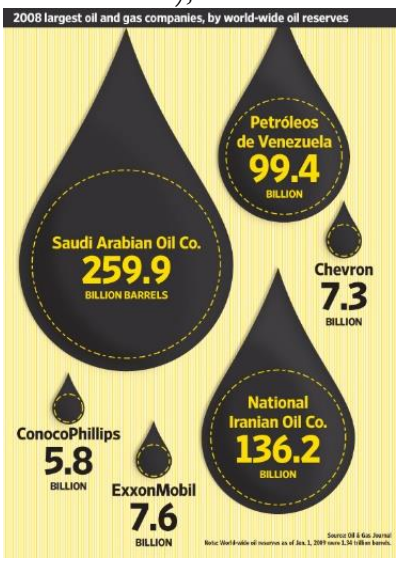
Divestment campaigners acknowledge that universities selling off their holdings will *not* affect fossil fuel companies' finances directly, since other investors will likely buy the shares and because the industry relies mainly on product sales, not investment. Direct financial harm is not the objective of the campaign: divestment is effective primarily as a symbolic action. Universities taking a public moral stand against a harmful industry can change public opinion, making it more 'stigmatized' and pressuring governments to change their laws on the issue in question. For fossil fuels, the real objective is pushing governments to enact more binding regulation of carbon emissions, either through higher carbon pricing or other forms of policy. In this view, divestment is 'symbolic but not trivial' (University of Toronto Divestment Brief 2015, 161). The question of whether divestment can be effective in this way is debatable.

Divest-Invest: Effects of Redirecting Investment

Although it is widely agreed that institutional investors removing their funds would not directly harm fossil fuel companies, there could be a direct financial impact on the sectors where funds are reinvested. Renewable energy and other 'clean tech' companies are widely recognized as under-capitalized (University of Toronto Report of the President's Advisory Committee 2015, 9), meaning that greater investment in this area could directly contribute to developing replacements for fossil fuels in energy generation, transportation and manufacturing.

Would divestment encourage policy change and a low-carbon energy transition? Considerations:

- *Policy change is unlikely, and climate change commitments have been broken before.* As divestment campaign founder Bill McKibben points out (2012), it is common for national governments to publicly comment on the threats of climate change and to make promises about reducing carbon emissions, while continuing to approve more oil exploration and drilling. To date, economic and energy security needs appear to have prevailed over concerns about climate change in shaping national government action.
- *The industry is already stigmatized, and change has not happened* (Parenti 2013). Public opinion of the fossil fuels industry is already low and a majority of people in several countries favour stricter regulation of fossil fuels and carbon emissions (revealed in public polling in the US, Canada and Australia; Gallup 2014; The Guardian 2016; Abacus Data 2016), but governments have not yet responded to public disapproval of the industry.
- *Divestment will not hurt nationally owned oil and gas companies,* who hold much larger reserves than private companies (MacAskill 2015; Ritchie and Dowtalabadi 2015). Because the divestment campaign is largely aimed at pushing for government action, this fact does raise a problem. Convincing governments to weaken their connections to the industry is perhaps unlikely, but in some cases privatization is happening. Governments may act strategically to reduce their exposure to a non-renewable resource that is projected to run out within a few decades. This concern applies only to countries with oil resources (Saudi Arabia, Venezuela and Canada being the top three largest), since oil-importing countries would likely be more



supportive of decreasing their expenses and increasing energy security by moving away from imported fossil fuels. (*Image: National oil company reserves compared to the reserves of the largest publicly traded companies, Wall Street Journal 2010).*

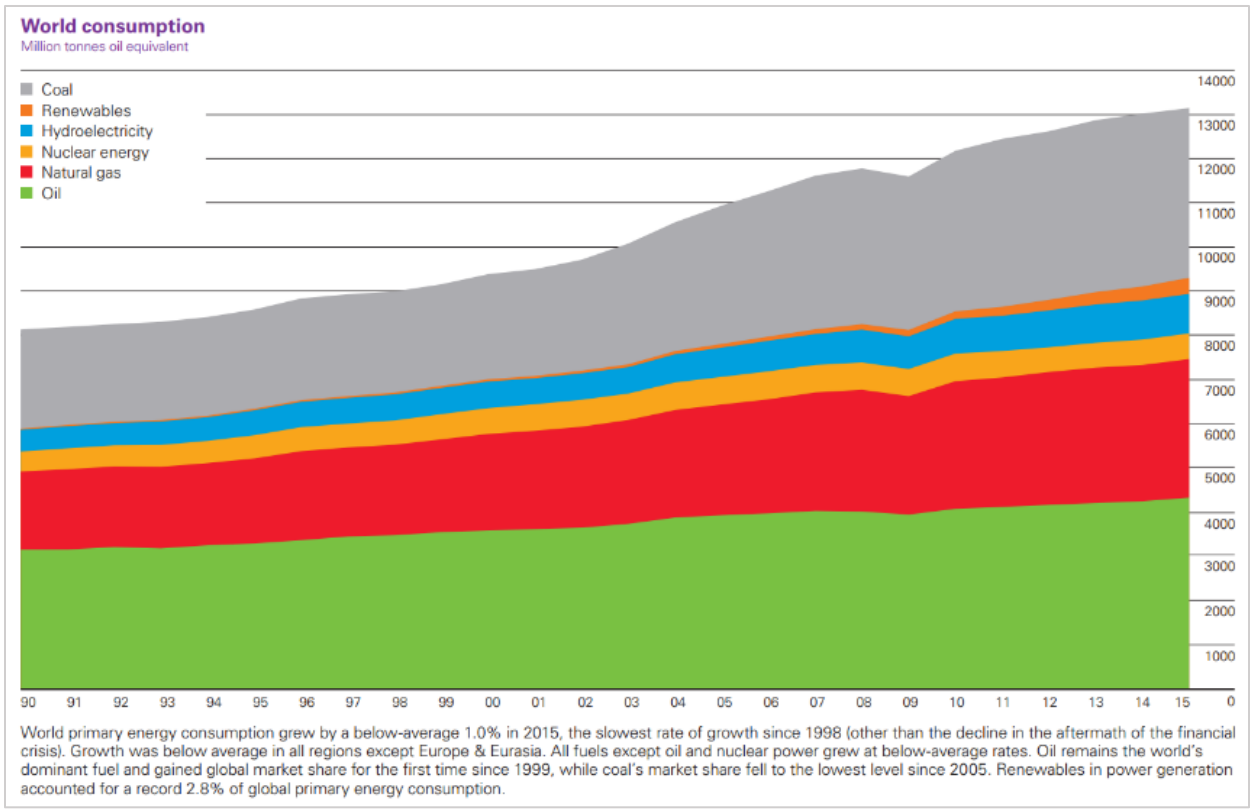
- *Policy change may not be possible.* Domestic veto points have hindered or overturned environmental legislation in the past (for example, the US federal government is being sued by some states over its attempt to reduce coal use). International trade regulation can block environmental protections, and legal challenges under investor-state dispute mechanisms in trade agreements have overturned domestic environmental policy in the past.

These points above suggest policy change is less likely. However:

- *Divestment campaigns have led to policy change before.* Studies found that the anti-apartheid divestment campaign did not harm the companies involved financially – but growing international pressure was later named by South African political leaders (F. W. de Klerk, Desmond Tutu) as one major factor contributing to an eventual regime change. University divestment drew public attention to the issue and preceded government sanctions. One recent study found that in "almost every divestment campaign we reviewed… divestment campaigns were successful in lobbying for restrictive legislation affecting stigmatised firms" (Ansar, Caldecott and Tilbury 2013, 14).
- *Policy action may become more likely as climate change becomes more visible and salient.* At 0.8°C of average global temperature warming currently, some effects are already being experienced, such as more severe droughts and storms. As climate change effects become more of a real experience, not a hypothetical future problem, governments may become more motivated to take stronger steps to counter it than they have in the past.
- *Policy action may not matter.* Changes in energy sourcing are already happening and countries are beginning to invest more heavily in renewable energy sources. Even some heavily fossil-fuel dependent states are indicating their plans to move away from oil (Saudi Arabia) and coal use (China) in electricity generation. As renewable alternatives become more reliable and cost-effective, and can reduce energy dependence on fuel imports from other countries, governments may act strategically to reduce their consumption of fossil fuels. Additionally, fossil fuels cannot last forever: BP estimates oil reserves will last only 50.7 years at current reserves-to-production rates (2016, 6), and McKinsey and Company estimate 53 years of production remaining from known oil reserves (2015). Other geoscientists estimate oil will be depleted by 2100, natural gas by 2200 and coal within a few centuries (Greene and Kammen 2014). Forward-thinking governments may therefore reduce their exposure to fossil fuels over the coming decades, even if they are heavily reliant on oil revenues now. For strategic and economic reasons, there may be a reduction in demand for fossil fuels, even without stricter carbon regulation.

On balance, the argument that more public pressure can push governments away from a resource they currently depend on (for energy and economic needs) is questionable. Increasing public disapproval of the industry may accelerate an energy transition that will need to occur eventually, but there are many unknowable factors in assessing how divestment will contribute to any government actions. Strategic interests (having domestic energy production), economics (having cost-effective energy sources) and geophysical realities (reserves running out or becoming harder and costlier to access) could be more significant motivators of government action than public disapproval.

Weaker arguments about the (in)effectiveness of divestment
Divestment will not hurt fossil fuel company finances (MacAskill 2015; Hebb 2015; Faust 2013). This is true but it is widely acknowledged by divestment campaigners, who are ultimately seeking a change in public opinion (revoking the industry's 'social license'), leading to policy change. Furthermore, reinvestment of money in low-carbon or 'clean technology' areas can have a direct impact on advancing alternative energy sources.
Divestment will be most effective by depriving fossil fuel companies of labour (MacAskill 2015). In reality many people work in stigmatized industries, either out of economic need or because they are not concerned about the industry's reputation.
Divestment will distract people from real solutions, leaving "less time" to focus on other climate change actions (MacAskill 2015). Public attention is not as limited as this suggests, and divestment campaigns have an educational role (McKibben 2013) that could motivate more people to act.
Divestment is a "blunt and ineffective" tool because the investor then loses their ability to influence the company through shareholder engagement (Hebb 2015, 2). Shareholder engagement has been questioned in terms of feasibility and impact (see Section 2).



Fossil fuels supply most of the world's energy (BP 2016, 42)

Financial implications

One of the most common arguments against divestment is that it is not compatible with fiduciary duty (acting on the best interest of the beneficiaries) because it would reduce financial returns. In response, some question the assumptions made about future profitability in the industry, or argue for a broader interpretation of fiduciary duty beyond short-term financial returns. The financial arguments for continuing to invest in fossil fuels are that:

- *Diversification* is generally better for financial returns, and the energy sector, which is dominated by fossil fuels, is a large part of the global market. Modern portfolio theory recommends broad sectoral and geographic diversification to reduce risk. Divestment supporters do not challenge this theory but instead argue that there is a particular risk in heavily carbon-based sectors.

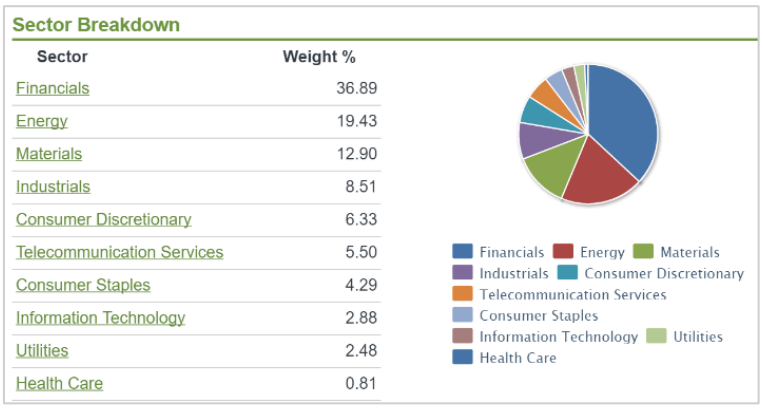


Image: The energy sector generally accounts for 20-25% of the Toronto Stock Exchange (TSX), and petroleum refining companies are 6 of the top 10 largest companies in the world (Fortune Global 500).

- *Past trends of industry profitability will continue* (e.g. Cornell 2015), even if there are downturns such as the fall in oil prices since mid-2014 or the ongoing decline of coal prices since 2008. Stricter regulation of emissions may not happen, and demand for the product could remain high. Reserves cannot last forever but advancing technology can continue to 'unlock' more sources of unconventional oil (offshore, deep water, Arctic, shale, oil sands).
- *'Sin stocks'* (of stigmatized industries such as alcohol, gambling and tobacco) generally outperform non-sin stocks (MacAskill 2015, citing Hong and Kacperczyk 2009). This claim has been disputed in economics literature, with findings depending on the years chosen, the 'sin industries' chosen (some include defense, which is arguably more socially acceptable) and the weighting of stocks – Hong and Kacperczyk used a hypothetical selection of stocks, not a real fund, meaning the findings could be skewed by different weightings (Hoepner and Zeume 2014). Other studies have found no significant difference in performance (Humphrey and Tan 2013). The largest meta-study finds either no difference or better performance for 'socially responsible' stocks in 90 per cent of over 2200 empirical studies conducted (Friede et al. 2015).
- *Transaction costs, compliance costs and higher management fees* of divesting. A growing number of pre-existing 'fossil free' funds have emerged over recent years, meaning that management fees and compliance costs would not necessarily increase. Transaction costs usually amount to about 1% of assets sold, but are not considered a major barrier as they are a regular cost of managing institutional investments (pers. comm., D. Henne, 29 June 2016).
- *Inability to fully divest.* Financial institutions and 'downstream' industries (pipelines, manufacturing, automotive firms) are also 'exposed' to carbon regulation risks (Ritchie and Dowtalabadi 2015, 12). It is true that a decline in fossil fuel company values would harm the overall Canadian or global economy – but so would 'dangerous' levels of climate change.

Some economists and investors take the opposing view, emphasizing that 'business as usual' regulation and the past profitability of fossil fuels may not continue in the future (Leaton et al. 2013; Carney 2015):

- *Potential of 'stranded assets.'* Fossil fuel companies facing higher carbon pricing, removal of subsidies, stricter regulation, or other policy changes would become less valuable. Direct subsidies on fossil fuels amounted to US$493 billion in 2014 (IEA 2016) and if the total costs of social, health and environmental externalities are included, the fossil fuels industry is effectively subsidized by US$5.3 trillion per year (IMF 2015). Carbon pricing or stricter regulation, if it happened, would therefore cut severely into fossil fuel company valuations and profits. One study found that internalizing the costs of damage caused by carbon emissions would outweigh profits for virtually all companies in virtually all years (Hope, Gilding and Alvarez 2015). Coal and unconventional oil are most vulnerable to regulatory risk because of their higher emissions relative to other fuels.
- *Potential of an energy transition without regulatory change.* An energy transition to 'clean' energy sources (renewable, low-carbon) will need to occur at some point, and may occur sooner than expected as renewable energy sources become more reliable and less costly. Over half of new electricity generation put on line in 2015 was renewable, for the first time (Bloomberg 2016).

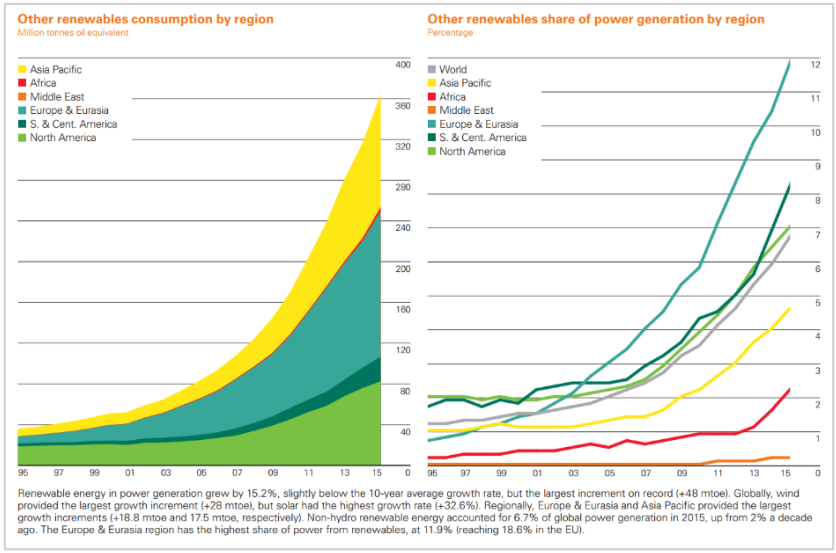


Image: Renewable energy production (other than hydroelectric and nuclear power) is increasing rapidly (BP 2016, 37). Investment in renewables is growing in wealthy and developing countries alike. 'Alternative' renewables such as geothermal, wind, solar and small-scale hydropower are becoming cheaper to build than coal or gas-powered electricity plants or capital-intensive nuclear power plants and large hydropower projects. Storage and transmission technology is advancing, operation costs are often cheaper, and distributed generation can be more cost-effective and resilient than building large-scale electricity grids. 'Alternative' renewables are still a small fraction of the global energy mix (IEA) but are increasing more quickly than projected (Nyquist 2015).

- *Volatility and permanent decline*. Oil and gas prices are volatile but coal may be in a permanent downturn, and its shares are less liquid, meaning divestment may have a larger financial impact on the industry. Coal use has plateaued in China after growing rapidly from 2000 to 2010, and many of the largest coal companies are facing financial trouble and even bankruptcy.

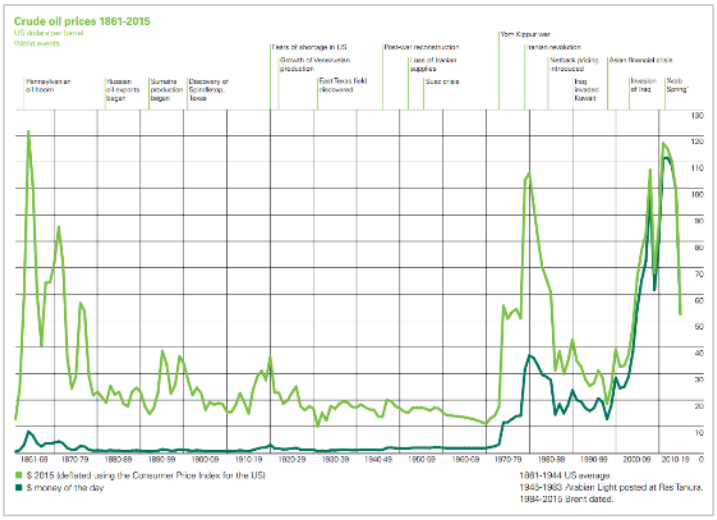


Image: Oil price volatility over time (BP 2016, 14).

Canadian and US growth in oil and gas production in recent years has largely been a result of expanding unconventional drilling such as hydraulic fracturing, which is more expensive and more polluting than conventional drilling.

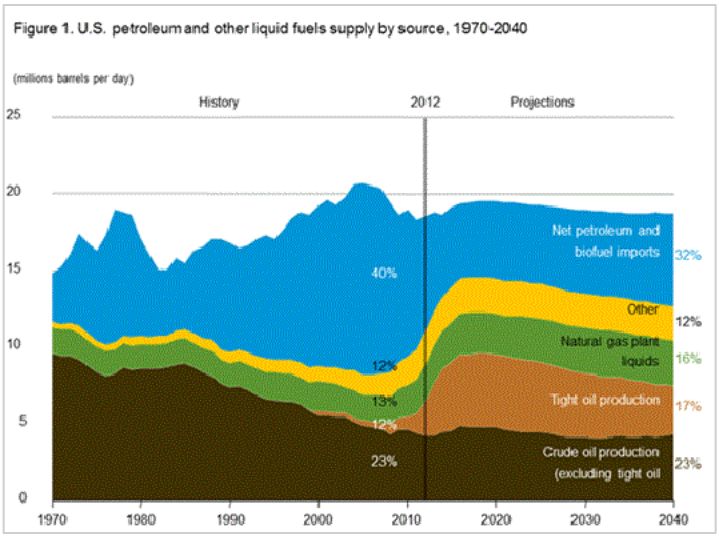


Image: US hydrocarbon supply by source, McBride 2015.

- *Credit downgrades*. Oil and gas companies are expected to recover from an ongoing dip in prices since 2014, but many had accumulated major debt from exploration projects before the current downturn. If credit ratings begin to take ESG factors into account, as the UN PRI initiative urges, company valuations could be damaged.
- *Climate risk: Climate change threatens value in all sectors*. Climate change threatens the economic functioning of all sectors (Covington and Thamotheram 2014), through a variety of factors such as disrupted food production, storm damage to buildings and transportation networks, health risks, human resettlement and conflict risks, loss of functioning ecosystems, and more. Investing in the continued profitability of fossil fuels companies can be seen as 'sacrificing the health of 92% of your portfolio for the 8% in energy' in this view (Covington and Thamotheram 2015, 3).
- *Replacement funds would need to meet existing financial criteria (risk, liquidity)*. For McMaster University specifically, any 'fossil free' funds chosen would need to pass a financial screening, meaning that the risk of poor performance would be reduced. Furthermore, two years of two-standard-deviation losses (similar to two 2008 crashes) would need to occur before the endowment's reserved 'insurance' fund would be used up and any payments from the endowment fund would be affected (pers. comm., D. Henne, 29 June 2016) This means that bursaries and other payments from the endowment fund are unlikely to be affected by a decision to divest.

Will fossil fuel companies transform into 'clean energy' companies?

The question of divestment is complicated by the fact that major fossil fuel companies often have some operations in renewable energy. Some observers also argue that *shareholder engagement* could push fossil fuel companies to 'transform' into renewable energy providers. However, renewable energy makes up a small fraction of operations (peaking at 6% according to University of Toronto Divestment Brief 2015, 143) and there is currently no indication a transformation will be likely. Oil reserves are still being explored despite the fact that most further development is incompatible with 'safe' climate change limits. At this point in time (and likely until it becomes more profitable to change their main business model) there are few signs of such a transformation. Historically, obsolete firms and industries have often been replaced by new ones, not saved by evolving quickly enough to transform their fundamental business. However, some energy companies have diversified into renewable energy by more than a token amount; such as Suncor in Canada.

Fiduciary duty

Some universities have rejected fossil fuel divestment on the grounds that it would be a breach of fiduciary duty (such as UBC, http://www.citopbroker.com/news/risk-ubc-finance-committee-votes-against-fossil-fuel-divestment-9783). This view assumes that fossil fuels will continue to be profitable (ignoring regulatory and demand-related risks) and does not consider any broader impacts of climate change on all financial investments. However, views of fiduciary duty are shifting to take a wider set of concerns into account. Analyzing non-financial aspects of investments such as environmental, social and corporate governance (ESG) performance is becoming more common, for financial reasons as well as ethical ones. A multinational legal review including Canada found that considering ESG "is clearly permissible and is arguably required" in all jurisdictions studied (UNEP 2005). Stronger ESG performance is also associated with better (or equivalent) financial performance in 90 per cent of empirical studies (Friede et al. 2015).

Future financial performance is essentially unknown, as many factors including regulation, carbon pricing and the availability of alternative energy sources would affect future demand for fossil fuels. Some experts see the risk of regulation as too great of a financial risk to continue investing in the industry. Additionally, climate change risk is a threat to all investment returns, and so for long-term investors, fiduciary duty could be interpreted as taking all steps possible to limit climate change, whether through divestment, shareholder engagement, or other methods.

Section 2: Alternative Options

Non-investment-related options

In addition to decisions made about divestment, many universities have committed to additional actions such as:

- Reduction of campus carbon emissions (University of Ottawa; University of Toronto; etc.).
- Promoting awareness of existing climate-related research and academic programs (University of Toronto; McGill; UBC)
- Increasing research funding in renewable energy and climate science areas (McGill).
- Encouraging financial institutions to develop more 'low-carbon' or 'fossil free' fund options for investment (London School of Economics).
- Engaging with governments to encourage changes to carbon policy (suggested by Ritchie and Dowtalabadi 2015).

These can be combined with divestment or chosen as alternative responses. Backlash from the university community has been strong where universities have chosen to focus *only* on reducing campus emissions and promoting their existing research and academic programs – it appears this action is not considered to be an adequate response to the climate change problem.

Partial divestment and portfolio tilting

Many universities have opted for partial divestment, or a gradual shift of their portfolio towards less 'carbon-intensive' holdings (portfolio tilting). These options can take a number of forms:

- *Partial divestment*. Divestment from coal and oil sands only, recognizing the higher carbon emissions these fuels create compared to conventional oil and natural gas. Many universities have chosen to divest only from coal and/or oil sands, often citing financial risk as a reason (Yale, Oxford, LSE, University of California, Stanford, Georgetown).
- *Diminishment* to x% of a portfolio's holdings, x% of an investment pool, etc. (often 1%, 5%, 10%). This is generally considered to be divestment, although it may be criticized as ineffective if the cap is too high.
- *Targeted divestment*. Targeting only 'aggressive' extractors who 'blatantly disregard' safe extraction limits (University of Toronto Advisory Committee Report) or only companies that promote climate misinformation (the focus of the MIT campaign, Leber 2015). This is similar to the ESG approach in targeting individual companies rather than entire sectors.
- *'Portfolio tilting'* towards lower-carbon companies and industries over time (uOttawa).
- *Parallel investment.* Divesting a small portion of endowment funds into a 'fossil free' fund to compare performance and to offer a fossil free option for donors (UBC, Concordia).
- *Positive screening and best-in-class performance*. 'ESG' involves monitoring the environmental, social and corporate governance performance of all holdings, and is often combined with shareholder engagement (to change company actions) and 'positive screening' of the portfolio by selecting better ESG performers (those that are 'best-in-class' in their sector, or improving on ESG scores) (University of Toronto; UBC; Oxford; LSE; etc.).

From a feasibility perspective, larger universities that have divested are sometimes selling only their *direct holdings* in fossil fuel companies, not indirect holdings -- which make up the vast majority of McMaster's investments. There is rarely an announcement of what happens to investment in pooled funds, but sometimes a percentage cap (1%, 10%) is set as a maximum

limit for restricted holdings in an investment pool. It should be noted that McMaster (with about 4.3% exposure to fossil fuels across all endowment funds) *may already have less exposure* than a university pledging to divest only direct holdings, or pledging to cap fossil fuels at 10% of an investment pool.

Comparing the ESG approach with divestment

Some universities have named the monitoring of ESG (environmental, social and corporate governance) performance as a suitable replacement for (or addition to) divestment. ESG has the advantage of applying to *all investment holdings on a continual basis,* and ESG reporting has grown rapidly since its introduction as part of the UN Principles of Responsible Investment (UN PRI) in 2006.

ESG is supported by many large institutional investors because it contains social responsibility components while also being primarily designed as a tool to maximize financial performance over a long-term timeframe. The assumption (supported by Friede et al. 2015) is that poor ESG performance eventually leads to worse financial performance as companies face reputational risk, regulatory risk and direct costs through fines and lawsuits.
Image: Examples of ESG indicators (UN PRI, https://www.unpri.org/about/what-is-responsible-investment).

In principle, the ESG approach has a number of advantages over 'negative screening' (divestment):

- *Less blunt than industry divestment*. ESG can allow for 'best-in-class' companies within an industry to be identified, or those that are improving their governance performance. The advantage of more selective screening is that a portfolio can remove worse ESG performers without eliminating a sector entirely. This allows diversification to be maintained.
- *Comprehensive and an ongoing process*. ESG evaluation applies to all holdings and is applied continuously in monitoring their actions, rather than divestment which is an issue-specific decision made at a particular point in time.
- *First-hand information*. Companies must report on their own performance and reports can be verified by third parties.
- *Shareholder engagement*. Shareholder activism can be used as a tool to shape company actions. The advantage of ESG is that it is increasingly mainstream and so there are opportunities for minority shareholders to coordinate on passing shareholder resolutions.

However, these same attributes could also be seen as negative:

- *Sometimes the entire industry is the problem*. Identifying the best performers within a sector may not be worthwhile if the entire sector is causing significant damage by supplying its products, as is the case with contested industries such as tobacco and fossil fuels.
- *Difficult to apply consistently*. Among UN PRI signatories, some fund managers or investors claim to apply systematic ESG evaluation when it may not be occurring in practice. There are no specific requirements for companies or fund managers to fulfil, and investors may be tempted to overlook ESG performance where there are strong investment returns.
- *Misleading information* (Scholtens 2014). Information provided by a company itself will likely present it in the best light possible. Lawsuits, 'unethical' practices and regulatory risks may be under-reported to investors. Fossil fuel companies in particular have been criticized for misrepresenting their conduct and their compliance with local laws and regulation. However, there can be third-party verification of ESG reporting, which can reduce this risk.
- *Limited effectiveness of shareholder engagement*. Institutional investors are rarely majority owners and have relatively little 'voice.' Coordination is possible but many shareholders may not support ESG-related resolutions that undermine short-term financial performance.

ESG can be combined with divestment (e.g. London School of Economics), or can be practiced on its own (e.g. University of Ottawa). Divestment is generally seen as a bolder symbolic action that gains more public and policymaker attention (but is 'blunt and ineffective' to critics, e.g. Hebb 2015), while ESG is a quieter approach to filtering investments. ESG is more comprehensive in theory, but often falls short in implementation. McMaster is developing specific requirements for fund managers to meet, such as providing explanations of *why* there are any holdings in fossil fuel companies, given the regulatory risks. This 'comply or explain' approach could be used to ensure other investor concerns are being responded to by fund managers.

As defined by the UN Principles for Responsible Investment (UN PRI), ESG is also primarily a calculation of financial risk, whereas divestment is often chosen for strictly ethical reasons. The UN PRI initiative is premised on the idea that all investors should evaluate ESG because it affects their finances: "Crucially, however, while these approaches seek to combine financial return with a moral or ethical return, responsible investment can and should be pursued even by the investor whose sole purpose is financial return, because it argues that to ignore ESG factors is to ignore risks and opportunities that have a material effect on the returns delivered to clients and beneficiaries" (UN PRI, https://www.unpri.org/about/what-is-responsible-investment). Furthermore, ESG considerations should be incorporated "where consistent with our fiduciary duties" (UN PRI, https://www.unpri.org/about/the-six-principles), which suggests that financial metrics are still the primary consideration, over any ethical concerns about the holdings. UN PRI centers on monitoring ESG factors, engaging with companies as a shareholder, and collaborating with other investors to exchange information.

Is shareholder engagement a solution?

In arguments against divestment, the benefits of 'shareholder activism' or 'shareholder engagement' in promoting ethical business activity are often praised. Supporters of the idea that shareholder engagement is effective in changing company practices include the UN PRI initiative; University of Ottawa; the Canada Pension Plan; University of Toronto divestment decision (Gertler 2016); McGill University; and Hebb 2015.

In contrast, a number of counter-arguments have been raised:

- *Practical limitations.* Many investors, even large institutions, own only a small fraction of shares and therefore have virtually no direct influence over a company. However, efforts to coordinate on shareholder resolutions are growing and are encouraged in UN PRI. Universities can also request fund managers to engage on their behalf. In recent years climate-related shareholder resolutions have reached nearly 50% support (CBC 2016; The Economist 2016).
- *Amoral investors.* Still, many investors are not interested in activist resolutions. Fund managers may also face a principal-agent dilemma in seeking to maximize financial returns while also maintaining ESG standards; some fund managers may not challenge profitable companies about their ESG performance.
- *Misleading information* (Scholtens 2014). Where companies do respond to shareholder concerns about how business would be modified in a 'low-carbon' regulatory scenario, the output is often '50 pages of glossy documents' rather than a realistic statement of actions (The Economist 2016). Fossil fuel companies have made questionable claims about their financial risks in upcoming decades (e.g. Ritchie and Dowtalabadi 2015, 11), often assuming that demand will remain high and that carbon capture and storage (CCS) technology will advance dramatically to alleviate any need to reduce emissions.
- *Fundamental change to a company's business model is unlikely through this method* (McKibben 2012; University of Toronto Divestment Brief 2015, 134; Leaton et al. 2013, 35). Companies have legally fought even relatively trivial shareholder resolutions such as those that call for more information on how companies would react to stricter carbon regulations. Even informational requests from shareholders are met with resistance – and pushing companies to transform their fundamental business model (from fossil fuels to clean energy) is a much larger request. Surveys of ESG professionals find that 98% think investors are 'doing too little' about climate risk (risk to financial value) and even some supporters of investor engagement have questioned its ability to transform companies (Covington and Thamotheram 2014).
- *Too gradual.* Past forms of investor engagement with company management have been slow and minor in scope, when the problem requires rapid and effective action ('forceful stewardship') from shareholders (Covington and Thamotheram 2015).
- *Limited scope.* This approach would require shareholders to 'take over' and change each publicly traded company individually – when many are not publicly traded. Divestment encounters the same problem, but divestment is aimed at changing regulation for all fossil fuel companies, not changing each one separately.

In the McMaster University context, because of the endowment fund's structure and size, McMaster does not have the ability to engage with companies directly. Direct engagement between large fund managers and companies exists but it is currently focused on corporate governance more than environmental impacts. McMaster does have the ability to encourage its fund managers to engage and proxy vote in certain ways (pers. comm., D. Henne, 29 June 2016).

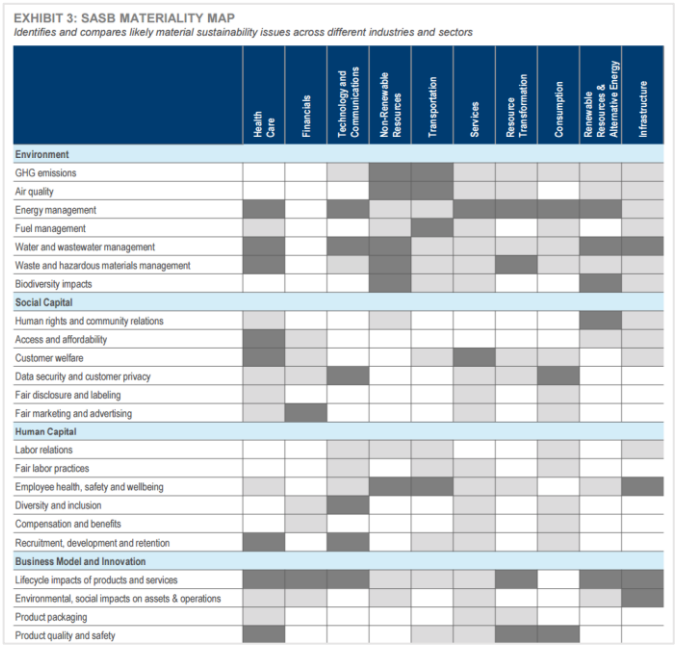
ESG in practice

- McMaster is at the forefront of developing specific requirements for ESG evaluation. Since 2013, reporting requirements on ESG have been phased in for fund managers, and managers are assessed (before hiring and periodically) based on their ESG screening activities. McMaster has recently strengthened its 'comply or explain' approach, where fund managers

are now required to explain *why* they have any investments in Top 200 fossil fuel companies. This has recently progressed from verbal explanations to written reports.

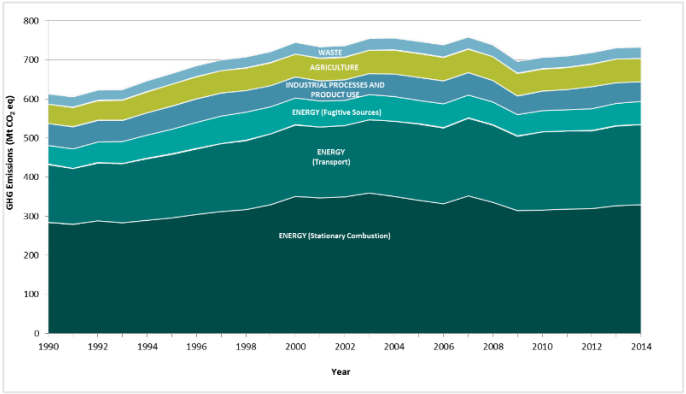
- Out of other Canadian universities, University of Ottawa has progressed the furthest in implementing UN PRI, and now publishes annual reports on the carbon footprint of its investments. University of Victoria and Simon Fraser University are now also UN PRI signatories, but have not yet published further documentation such as annual reports.
- Province of Ontario: Pension fund managers are now required to report on whether they use ESG analysis and if so, how. No public summaries of this data are available yet, but some may be published by late 2016 (pers. comm., Financial Services Commission of Ontario, 8 June 2016)
- Blackrock and other organizations have published reports on what indicators are material to ESG reporting. Companies are not necessarily analyzed in all areas: more efficient, but could miss some relevant information. For example, community relations and human rights are not listed as relevant to the 'resource transformation' sector:

When applied systematically, ESG can be effective in monitoring the non-financial attributes of companies. However, for the reasons above, and because it may not be fully applied in practice, some observers view it as less effective than taking a public stand of divestment. Shareholder activism does appear to be growing regarding climate change issues (The Economist 2016), although some find this approach unlikely to ever be effective in transforming companies. Views vary, and ESG and divestment can be combined – to send a moral message on particular issues while monitoring all investments continuously.
Image: A partial list of ESG indicators (Blackrock 2016, 6).



Montreal Carbon Pledge

Related to ESG monitoring, the Montreal Carbon Pledge is a commitment for investors to monitor the carbon emissions of all investment holdings, to report annually on the findings, and to gradually reduce the carbon intensity of the portfolio over time. University of Ottawa has adopted this approach in addition to ESG.
Image: Sources of Canada's GHG emissions by sector (Government of Canada 2016).



For divestment campaign supporters, monitoring is a weak action when there is already sufficient information on emissions from each sector: "Investors are still focused on promoting transparency

and on refining their thoughts, when urgent action is needed to reduce the risk of value destruction" (Covington and Thamotheram 2014, 46). Monitoring adds more detail, but information already exists on emissions by sector, and tracking emissions does not solve the problem: Although fossil fuel extractors are only the suppliers of fuels and other industries are the primary users (transportation, energy generation, manufacturing, etc.), divestment campaigners find it most appropriate to address the supply side of the emissions problem.

Conclusions

There are competing arguments about the effectiveness of divestment and about appropriate steps for institutional investors such as universities to take in response to climate change. Many claims made in the divestment debate are disputed, and many rest on predictions of future activity (regulation, technology change, and so on) that are uncertain. The fundamental lesson from this review of arguments is that there are many assumptions underpinning 'expert' statements on future financial performance, the effectiveness of ESG, and other effects of divestment. Awareness of the source of information (for example, a UN PRI creator's report that favours an ESG approach is perhaps not neutral) and opposing arguments is important in having an informed debate about divestment and alternative options.

Section 3: Context and Options for McMaster

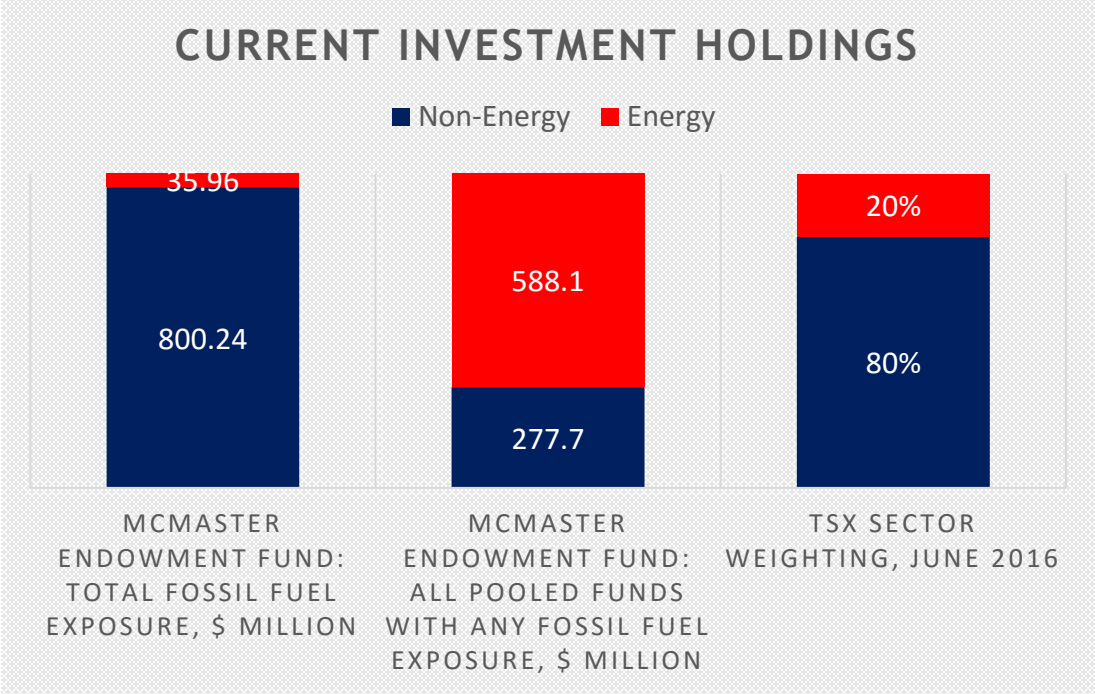
The previous sections have reviewed different options from a general or theoretical standpoint. McMaster's unique circumstances may affect which options are appropriate or feasible. All points below have been informed by McMaster Chief Financial Officer Deidre Henne's presentations to the President's Advisory Committee on Fossil Fuel Divestment and other communications for clarification (pers. comm. 9 May 2016; 29 June 2016). Key considerations for McMaster University specifically are:

Research implications

McMaster receives research funding from one company in the Carbon Underground 'Top 200' fossil fuel company list. McMaster invests in 20 of the top 200 (but not the company responsible for some research funding), as well as some smaller fossil fuel companies that do not appear on the list. It is possible this funding could be rescinded if McMaster chose to divest. Community relations with steel producers or the automotive industry could also be affected. McMaster's social responsibility and investment policy does not require research funding or relations with the industry to be considered, except to state that receiving funds from an organization the university has divested from would be morally inconsistent (see Appendix A for the policy).

Practical implications: Key facts about McMaster's investments

- As of June 2016, the total endowment fund investment pool was worth (CAD) $836.2 million. $36.2 million, or about 4.3% of this total amount, is invested in fossil fuel companies (using the Carbon Underground 'Top 200' list of companies).
- Some universities are promising to divest only direct holdings, not indirect investments. In contrast, McMaster's holdings are *virtually all indirect*. The endowment fund is divided between 12 externally managed funds: 11 pooled funds and 1 segregated fund. 6 of these 12 funds have some exposure to fossil fuel holdings.



- Divesting completely would therefore require replacing 6 out of 12 funds. In the image above, the left column represents the actual value of holdings in fossil fuel companies (in red), whereas the middle column represents the value of all of the pooled funds that contain *any* fossil fuel holdings – all of which would need to be sold in order to fully divest. Finding existing funds specifically designed to be 'fossil free' would keep management fees from rising, compared to the more expensive option of creating McMaster-specific segregated funds out of the existing pooled fund holdings.
- Reducing fossil fuel holdings to 5% (or some small percentage) of any investment pool would also be possible. The 6 exposed funds have 19.7%, 9.2%, 5.6%, 4.2%, 1.9% and 0.46% of their holdings in fossil fuels, with the first two both in Canadian equities. At 4.3% overall exposure to fossil fuels, McMaster is already less invested in fossil fuels than many other Canadian universities and compared to the Canadian equities market (the TSX is generally 20 to 25% energy).
- In general, across all holdings, McMaster has a policy not to invest more than 10% of its money in any one industry or company. In practice, the cap is usually 5%.

- **Divestment does not necessarily mean losing money**. Every new fund, including any 'fossil free' or socially responsible fund found, must go through rigorous screening relating to financial performance and risk. Many 'fossil free' funds are recent creations, with limited history, meaning that some may be considered if they are offered by established fund managers but others would have to build up several years of performance history first. Future financial performance cannot be guaranteed, but thorough financial screening reduces the risk of poor performance. Additionally, an 'insurance' fund is held in reserve so that it would take two years of two-standard-deviation losses (similar to two 2008 financial crashes) before any payments from the endowment would be affected.

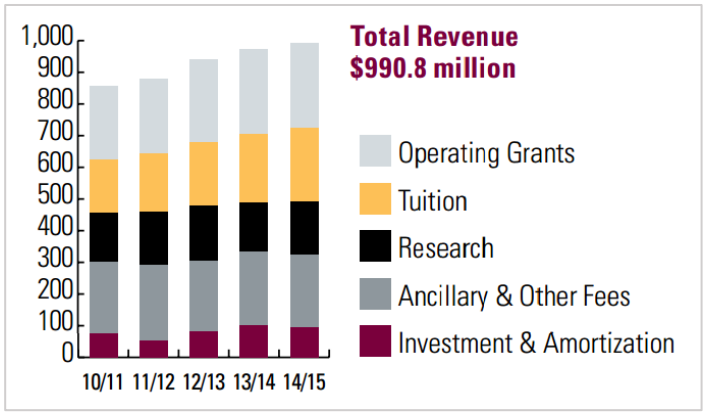


Image: Investment returns are a relatively small part of revenue (McMaster University 2016, 22).

- **ESG is already being applied**: Since 2013, all new fund managers have been assessed based on their application of ESG, and existing fund managers are reviewed periodically. **McMaster is already at the forefront of developing clear and meaningful ESG requirements** for fund managers. Currently, holdings in fossil fuel companies are not prohibited but fund managers must explain and justify them to McMaster in the light of stranded asset risk. Some fund managers claim to apply ESG screening but are still holding notoriously 'unethical' companies – the process for evaluating ESG has not yet been defined or standardized.
- Regarding **shareholder engagement**, fund managers with tens of billions of dollars of assets under management do have a large influence on companies. They do meet with company leadership, although at this point environmental issues have not been a top issue. McMaster itself does not have the same opportunity to interact directly, but can encourage its fund managers to engage on certain issues.
- **Monitoring carbon emissions** from all investments is possible, but would not start immediately because a competent, affordable measurement service would need to be found first.
- McMaster is allowed one free search (for fund managers) per year, and the transaction cost of moving assets is generally 1% of their value. Funds are periodically replaced for financial or non-financial reasons, and so transaction costs are considered a normal cost of doing business, not a major obstacle to change.

Appendix A: McMaster University Policy on Social Responsibility and Investment

McMaster's investment policy relating to social responsibility can be found at http://www.mcmaster.ca/policy/General/Financial/SocialResponsibilityandInvestmentPolicy.pdf. The full text is attached below:

"

McMaster University

Policies, Procedures and Guidelines

Complete Policy Title: **Social Responsibility and McMaster's Investment Policy**	Policy Number (if applicable): **N/A**
Approved by: **Board of Governors**	Date of Most Recent Approval: **September 17, 1980**
Date of Original Approval(s):	Supersedes/Amends Policy dated:
Responsible Executive: **Secretary of the Board of Governors**	Enquiries: **University Secretariat**
DISCLAIMER: *If there is a Discrepancy between this electronic policy and the written copy held by the policy owner, the written copy prevails*	

Introduction

In recent years we have witnessed a growing concern in our society over corporate social responsibility and the responsibility of investors (both individual and institutional) to act within their powers to ensure that the issuers of securities do not cause social harm by violating basic human rights.

As individual members of society and of the University community, we recognize the need to engage in affirmative action for social improvement. McMaster University, in its role as an institutional investor, has a prima facie obligation to avoid condoning social injury resulting from the activities of any corporation, government, or government agency whose securities it holds.

1. **The Social Responsibility of the University**

   The primary social responsibility of the University is to fulfill its role as a centre of learning and free inquiry. Any discussion of the University as an institutional investor is subordinate to the preservation of a climate in which teaching, scholarly inquiry, freedom of dissent, social comment and criticism may flourish.

2. The University as Investor

As an investor the University's primary objective is to maximize financial returns over the long run. Affirmation of the primacy of this objective, however, does not absolve the Finance Committee from a periodic review of investments to ensure that there are no compelling moral or social considerations that might warrant disinvestment. It is possible that the position of the University as a shareholder or a lender in relation to certain corporations, industries, or governments may be inappropriate no matter how attractive the financial return.

Until recently the investment policy of McMaster University has been geared solely to maximizing return on investments. The agenda of a shareholders' meeting usually deals with routine matters like approval of financial reports, election of the board of directors and the appointment of auditors. As long as the company exhibits financial responsibility, it is customary for the University to vote proxies on routine issues according to the management's recommendations.

3. Considerations for Policy Making

Any attempt to devise an investment policy for McMaster which is sufficiently sensitive to, and effective in addressing, the social implications of a particular corporation's or government's conduct must consider the following questions:

a. What are the facts?

b. By what criteria do we decide whether or not the social behaviour of a corporation, industry, or government is morally acceptable?

c. What is the most effective means to voice concerns when a corporation, industry, or government is considered to be morally praiseworthy or blameworthy?

d. Who speaks for the University on social issues?

e. Who makes decisions on the University's investment policy?

Each of these questions will be briefly considered in turn.

a. The facts.

In any specific case it will be essential to make careful investigation of all available information bearing on the activities of the corporation or government and the effect of these activities on the employees and other nations of the country, as well as the probably effect of discontinuance of the activities.

b. The criteria.

The Declaration of Human Rights proclaimed by the United Nations Organization, together with the associated International Covenants, suggest guidelines which may

provide a basis for assessing social performance. A copy of the Declaration may be obtained from the Board of Governors office.

c. Voicing the concerns.

If after investigation of the policy of a corporation, industry, or government appears to be incompatible with the Declaration, the following avenues are open to the investor:

i) Communicate the Finance Committee's concerns to the security issuer in question requesting clarification of its policy;
ii) Raise questions at shareholders' meetings;
iii) Introduce resolutions at shareholders' meetings;
iv) Where feasible, vote for the appointment of concerned individuals to the Board of Directors;
v) Disinvestment.

d. "Who speaks for the University on social issues?"

This is a difficult question to answer. The following excerpt from the Kalven Committee report to the Ford Foundation is relevant here:

> "There is no mechanism by which the University can reach a collective position without inhibiting the full freedom of dissent on which it thrives. . . . This creates a heavy presumption against the University taking collective action or expressing opinions on social and political issues of the day, or modifying its corporate activities to foster social or political values, however compelling and appealing they might be."[1]

Acknowledgement of the problem should not obscure the fact that the University is concerned with the goals of society. "It should be a forum for analysis, debate and the search for truth."[2] In the pursuit of these activities it is imperative that faculty members, administrators, members of the supports staff and students be allowed free expression of opinion with impunity. Furthermore, it would be invidious to presume that any single group could speak for all members of the University community.

Such considerations militate against the establishment of inflexible guidelines for defining social policy as they relate to the investment decisions of the Finance Committee of the University.

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[1] Reported in Corporate Social Responsibility and the Institutional Investor, a report to the Ford Foundation. B. Longstreth, H.D. Rosenbloom. Praeger Publishers. Quoted in "Social Responsibility and Queen's Investment Policy", pp. 5-6.

[2] "The Social Responsibility Dimension of Investing the Smith College Endowment: Some Objectives and Policies", p.III - C-1.

e. Making the decision.

Since these difficulties exist, the Finance Committee must continue to assume final responsibility for the investment policy of the University. It will be clear that goodwill will be required of the various constituencies of the University when the Finance committee makes decisions about which there are internal disagreements. The Finance Committee, however, does have a serious obligation to consider matters of social responsibility that may arise in connection with its investment decisions. The disagreements referred to may be mitigated to the extent that the Finance Committee's decisions reflect the full range of concerns that exist on campus and among the University's alumni.

4. Recommended Policy

1. That the Board of Governors go on record as supporting the Declaration of Human Rights of the United Nations Organization as it bears on investment policy.

2. That the Finance Committee indicate its readiness to consider documented submissions relating to specific investments from its own members or from any other member of the University community.

3. When, after due investigations, the Finance Committee considers that the activities of the issuers or securities held by the University are morally reprehensible, then the following steps should be taken:

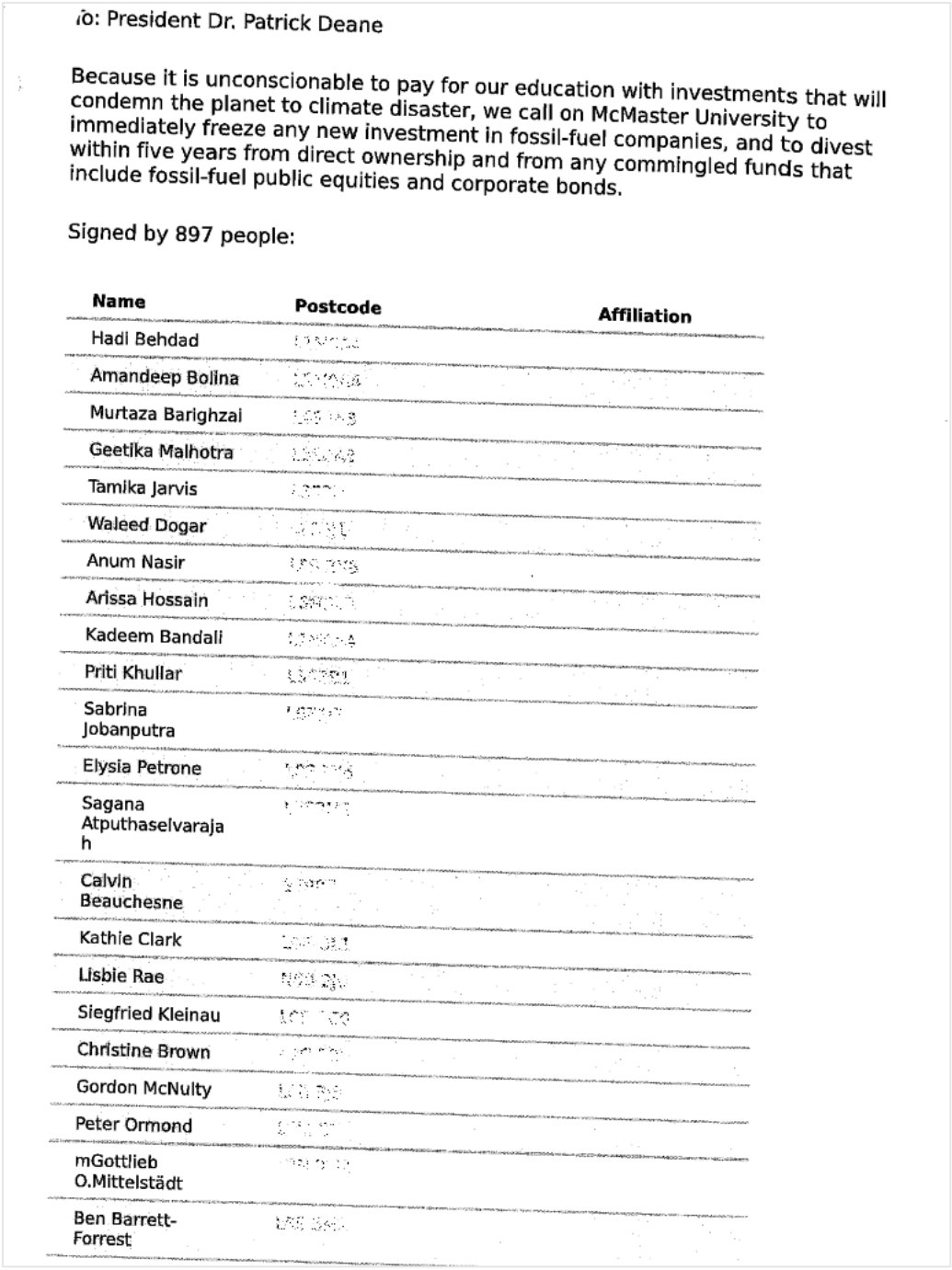
    a. Communicate this concern to the corporation or government requesting a clarification of its policy either by letter or by personal interview;
    b. if the corporation or government is still considered to be culpable, the Finance Committee should then seriously consider disinvestment, recognizing the following constraints:
        i. Disinvestment must take place in an orderly and responsible manner. In responding to its felt social obligations at home and abroad, the Finance Committee may not rashly embark on a programme of disinvestment detrimental to the University's financial resources or the position of the University Pension Plan.
        ii. Consistency demands that if the University decides it cannot in good conscience invest in the securities of a corporation, it must also decline financial support form the same corporation. [sic]

4. In the matter of voting proxies

    a. Where no contentious issue is involved, the University administration will vote by proxy on routine matters.
    b. Where a contentious issue is involved, or a special issue arises, the University administration will refer the request for a proxy vote to the Finance Committee for a decision.
    c. In any event, the University will not delegate its vote."

Appendix B: Student and Faculty Petitions Received by McMaster

The text of the student petition for divestment appears below (made available to the President's Advisory Committee on Fossil Fuels Divestment, 12 February 2016). Postal codes appear in the original text but have been removed here.



To: President Dr. Patrick Deane

Because it is unconscionable to pay for our education with investments that will condemn the planet to climate disaster, we call on McMaster University to immediately freeze any new investment in fossil-fuel companies, and to divest within five years from direct ownership and from any commingled funds that include fossil-fuel public equities and corporate bonds.

Signed by 897 people:

Name	Postcode	Affiliation
Hadi Behdad		
Amandeep Bolina		
Murtaza Barighzai		
Geetika Malhotra		
Tamika Jarvis		
Waleed Dogar		
Anum Nasir		
Arissa Hossain		
Kadeem Bandali		
Priti Khullar		
Sabrina Jobanputra		
Elysia Petrone		
Sagana Atputhaselvaraja h		
Calvin Beauchesne		
Kathie Clark		
Lisbie Rae		
Siegfried Kleinau		
Christine Brown		
Gordon McNulty		
Peter Ormond		
mGottlieb O.Mittelstädt		
Ben Barrett-Forrest		

The full text of the faculty petition appears below (made available to the President's Advisory Committee on Fossil Fuels Divestment, 12 February 2016).

Written: 8 August 2014

Delivered: 5 October 2015

Dear President Patrick Deane:

Re: Divestment from Fossil Fuel Corporations

We write with an urgent request to have McMaster University divest its endowment funds from fossil fuel companies over the next five years. As of 2013, McMaster University had invested $47 million (12%) of its endowment in the top 200 companies that own the world's largest fossil fuel reserves (McMaster documents obtained through a "Fossil-Free McMaster" Freedom of Information request). This divestment would serve as a strong statement on the harm that fossil fuel production and consumption are causing our global environment and humanity. We see this as an act of ethical responsibility, a protest against current practices that cannot be altered as quickly or effectively by other means. This request is consistent with the McMaster Social Responsibility and Investment Policy (http://www.mcmaster.ca/policy/General/Financial/SocialResponsibilityandInvestmentPolicy.pdf)

It is widely recognised that the extraction and burning of fossil fuels contributes atmospheric carbon. We also recognise its contribution to ongoing global warming and that without reducing emissions we are headed for warming of about 4.5°C or more by 2100 (Report by American Association for the Advancement of Science, 2014: http://whatweknow.aaas.org/get-the-facts). Human deaths due to climate change are as high as 150,000 in a single year, according to the World Health Organisation (http://www.who.int/globalchange/news/fsclimandhealth/en/) and climate change is implicated as one of the main reasons we are entering the sixth great extinction period (Maclean and Wilson 2009, PNAS). If we conclude that destroying the climate in which humanity evolved by promoting fossil fuel emissions is wrong, then surely profiting through investments in fossil fuel companies is also wrong.

Divesting our endowment funds will not prevent fossil fuel companies from continuing to promote fossil fuel consumption. It will, however, exert pressure on them to act responsibly as well as increasing the social and economic costs so that they may not continue acting with impunity. Divestment from apartheid South Africa did not cause the collapse of the South African regime but exposed the destructive and negative consequences of apartheid that led to its end. We see divestment as a symbolic effort that isolates fossil fuel companies for their negative actions and pushes them to become green energy companies.

Universities, particularly Canadian universities like McMaster, should play a leading moral role by divesting from fossil fuels setting an example for others to follow. Students at McMaster have initiated this effort through Fossil Free McMaster, one of a large and growing number of student groups involved in fossil fuel divestment campaigns. To date, 13 universities including Stanford and San Francisco State University, 30 cities/counties, 52 religious institutions, the World Council of Churches, and 20 foundations are on record, pledging divestment (http://gofossilfree.org/commitments/). Students are now more aware of these issues and may consider a university's investment choices when applying.

Currently, fossil fuel companies have five times more reserves than the world can afford to burn with a chance of staying under a 2°C level of global warming (see Do the Math by Bill McKibbon (Trailer: http://act.350.org/signup/math-movie/; Full movie: http://vimeo.com/66066932) . The 2°C limit in global warming was agreed to by 114 countries at the Copenhagen Climate Change Conference, suggesting that 4/5 of the reserves should be considered "stranded assets".

Ongoing efforts to expand Canadian tar sands production, supported strongly by our federal government, are particularly harmful because of elevated carbon emissions and the dangers of shipping bitumen. The federal

support is justified and predicated on a flawed premise that portrays these companies as star companies with stellar contribution to the Canadian economy and Canadian jobs. The facts are otherwise. Direct tar sands employment is estimated at just over 0.5 per cent of employment (100,000 jobs employed directly or 175,000 and around 1 per cent counting indirect jobs). Over 70 per cent of tar sands profits flow to foreign investors and the government has managed to collect around 6 per cent of the total value generated by the tar sands (or an average 9 per cent of the industry's economic rent; Michal Rozworski, 2014).

Furthermore, there is no evidence to show that that planned divestment would damage the financial returns to McMaster's portfolio. A number of studies, including one by S&P Capital IQ, demonstrate that over the last ten years an endowment reflecting the S&P 500 without targeted fossil fuel companies would have outpaced one with them. The S&P index based portfolio has out-performed tar sands based ones by a long shot. Besides it is possible for the University to consider re-directing investment to renewable energy alternatives with higher returns and lower risks (Atif Ansar, Ben Caldecott, James Tilbury, "Stranded assets and the fossil fuel divestment campaign: what does divestment mean for the valuation of fossil fuel assets?" Smith School of Enterprise and the Environment, Oxford University, 2013, pp. 71-72).

The University has a choice. It either invests in fossil fuel corporations sustaining this industry's harmful damage to the environment, or it divests, exerting pressure on the industry to promote green sources of energy. If the University regards divestment as "political," then its continued investment is a similarly political act, one that finances present harmful corporate activities and calculates profit from them.

We the undersigned are faculty and officers of the University, many with knowledge and research in climate science, energy, business management, ethics, and the effects of climate change on health, prosperity, and biodiversity. Many are alumni and donors. We appeal to you, as representatives of the University, and to our colleagues, fellow alumni, and donors to join us in signing this statement as an act of conscience and fiscal responsibility and to help bring the University to divest its holdings in fossil fuel corporations as soon as possible,. Divestment would truly move McMaster forward with integrity.

Sincerely,

James S. Quinn, Ph.D., Professor, Biology Department, McMaster University

Atif Kubursi, Ph.D., Professor Emeritus, Economics Department, McMaster University.

David Hitchcock, Ph.D., Professor Emeritus, Department of Philosophy, McMaster University

Altaf Arain, Ph.D., Professor, School of Geography and Earth Sciences, McMaster University

Art Heidebrecht, Ph.D, P.Eng., Director W.G. Booth School of Engineering Practice, McMaster University

Graeme MacQueen, Ph.D., Retired Associate Professor, Department of Religious Studies, McMaster University.

Alan Mendelson, Ph.D., Professor Emeritus, Department of Religious Studies, McMaster University

Martin Daly, Ph.D., FRSC, Professor Emeritus, Department of Psychology, Neuroscience & Behaviour, McMaster University

Don Wells, Ph.D., Professor, School of Labour Studies & Department of Political Science, McMaster University

Brian W. Baetz, Ph.D., Professor, Department of Civil Engineering, McMaster University.

Ben Bolker, Ph.D., Professor, Department of Mathematics and Statistics and Department of Biology, McMaster University

Michael Egan, Ph.D., Associate Professor & University Teaching Fellow, Department of History, McMaster University

Gary Purdy, Ph.D., D.H.C., D.Sc., F.C,I.M, F.A.S.M., F.T.M.S., N.A.E., F.R.S.C., P.Eng, University Professor, Materials Science and Engineering, McMaster University.

Susan Dudley, Ph.D., Professor, Department of Biology, McMaster University.

Ben Evans, Ph.D., Associate Professor, Department of Biology, McMaster University.

Rama S. Singh, Ph.D., Professor, Department of Biology and Centre for Peace Studies, McMaster University.

Christopher M. Wood, Ph.D., CRC Tier I Chair in Environment and Health, Distinguished University Professor, Professor, Department of Biology, McMaster University.

Paul Andrews, Ph.D., Assistant Professor, Department of Psychology, Neuroscience, and Behaviour, McMaster University.

Robert Korol, Ph.D., Professor Emeritus, Civil Engineering Department, McMaster University.

Nancy Doubleday, Ph.D., Director, Peace Studies, and Associate Professor, Department of Philosophy, McMaster University

Daniel Coleman, Ph.D., Professor, Department of English and Cultural Studies, McMaster University.

Ana R. Campos, Ph.D., Professor, Department of Biology, McMaster University

Xu-Dong Zhu, Ph.D., Associate Professor, Department of Biology, McMaster University

Lofti Belkhir, Ph.D., Associate Professor and Class of 1962 Mechanical Engineering Endowed Chair in Eco-Entrepreneurship, McMaster University.

Barry Allen, Ph.D., Professor, Department of Philosophy, McMaster University.

André Bedard, Ph.D., Professor, Department of Biology, McMaster University.

Jurek Kolasa, Ph.D., Professor, Department of Biology, McMaster University.

David Feinberg, Ph.D., Associate Professor, Department of Psychology, Neuroscience, and Behaviour, McMaster University.

Graham Scott, Ph.D., Assistant Professor, Department of Biology, McMaster University.

Gail Krantzberg, Ph.D., Professor and Director of the Centre for Engineering and Public Policy in the School of Engineering Practice, McMaster University

Diane Enns, Ph.D., Associate Professor, Department of Philosophy, McMaster University

Reuven Dukas, Ph.D., Professor, Department of Psychology, Neuroscience & Behaviour, McMaster University

Jonathan Dushoff, Ph.D., Associate Professor, Department of Biology, McMaster University

Lovaye Kajiura, Ph.D., Assistant Professor (Teaching), Department of Biology, McMaster University

Stephen M. Streeter, Ph.D., Associate Professor, Department of History, McMaster University

Ruth Frager, Ph.D., Associate Professor, Department of History, McMaster University

Robin Cameron, Ph.D., Associate Professor, Department of Biology, McMaster University

Paul A Faure, Ph.D., Associate Professor, Department of Psychology, Neuroscience & Behaviour, McMaster University

Joanna Wilson, Ph.D., Associate Professor, Department of Biology, McMaster University

Herb Jenkins, Ph.D., .Professor Emeritus, Department of Psychology, McMaster University

Pavlos Kanaroglou, Ph.D., Professor, School of Geography and Earth Sciences, McMaster University

Mark Sproule-Jones, Ph.D., Professor Emeritus, Department of Political Science, McMaster University

Robert O'Brien, Ph.D., Professor of Political Science, McMaster University

James Johnson, Ph.D., Professor Emeritus of Economics, McMaster University

David Goodings, Ph.D., Professor Emeritus of Physics and Astronomy, McMaster University

Mary Sealey, Hons BSc - 1970; MBA 1982, McMaster University

Andrew J. Rainbow, Ph.D., Professor Emeritus, Department of Biology, McMaster University.

Neil McLaughlin, Ph.D., Associate Professor, Sociology Department, McMaster University

Catherine Beattie, Ph.D., Retired Associate Professor, Department of Philosophy, McMaster University.

Gary Warner, D de l'U., Retired Associate Professor of French, McMaster University.

Pauline Prowse, McMaster University Alumni, Chair of the Board of Directors of the Hamilton Association for Renewable Energy

Alvin A. Lee, Ph.D., President Emeritus & Professor of English Emeritus, McMaster University

George Sorger, Ph.D. Emeritus Professor, Department of Biology, McMaster University.

Dr. Pat Chow-Fraser, Ph.D., Professor of Biology, Director of Life Science Program, McMaster University.

Matthew Cooper, Ph.D., Professor Emeritus, Department of Anthropology, McMaster University

Bruce Milliken, Ph.D., Professor, Department of Psychology, Neuroscience & Behaviour, McMaster University

Deda Gillespie, Ph.D., Professor, Department of Psychology, Neuroscience & Behaviour, McMaster University

Joseph A. Kim, PhD, Associate Professor, Department of Psychology, Neuroscience & Behaviour, McMaster University

Judy Major-Girardin, M.F.A., Associate Professor, School of the Arts, McMaster University

Sally McKay, Assistant Professor, School of the Arts, McMaster University

Sue Becker, Ph.D., Professor, Department of Psychology Neuroscience & Behaviour, McMaster University

Joshua Weresch, MA of Divinity, BA Music and Religious Studies from McMaster University

Graham Petrie, Ph.d., Emeritus Professor, English and Film Studies, McMaster University

Jennifer J. Heisz, Ph.D., Assistant Professor, Department of Kinesiology, McMaster University

Jean Wilson, Ph.D., Associate Professor and Director, Arts & Science Program, McMaster University

Carmel Mothersill DSc. Professor and CRC Chair, Dept. Medical Physics and Applied Radiation Sciences, McMaster University

Beth Marquis, Ph.D., Assistant Professor, Arts & Science Program, McMaster University

Henry A. Giroux, Professor and McMaster University Chair for Scholarship in the Public Interest

Michael Mikulak, Ph.D., Adjunct Faculty, Sustainable Futures Program, McMaster University.

Lisbie Rae, PhD., sessional lecturer in Drama (retired), McMaster University

G. Brian Golding, Professor, CRC Tier I chair, Department of Biology, McMaster University

Jennifer Bonnell, Assistant Professor, Department of History, McMaster University

Patrick Byrne, MSc., Sessional Faculty and Program Coordinator, Arts & Science Program, McMaster University

Richard Arthur, Ph.D., Professor, Department of Philosophy, McMaster University

Bradd Hart, Ph.D., Professor, Department of Mathematics and Statistics, McMaster University

Nicholas Kevlahan, Ph.D., Professor, Department of Mathematics and Statistics, McMaster University

Colin Seymour, PhD., Professor, Department of Medical Physics and Applied Radiation Sciences, McMaster University

Gregory Wohl, PhD, PEng, Associate Professor, Department of Mechanical Engineering, McMaster University

Krista Madsen Baker, Assistant Professor, Department of Kinesiology, McMaster University

Sara Bannerman, PhD, Assistant Professor, Department of Communication Studies and Multimedia, McMaster University

Laura Parker, Ph.D., Associate Professor, Department of Physics and Astronomy, McMaster University

Kari Dalnoki-Veress, Ph.D., Professor, Department of Physics and Astronomy, McMaster University.

John Vickers, Ph.D., Professor Emeritus, Faculty of Health Sciences, McMaster University

Karen Balcom, Ph.D., Associate Professor, Department of History, McMaster University

Cheryl Quenneville, Ph.D. P.Eng, Assistant Professor, Department of Mechanical Engineering, McMaster University

Amber Dean, Ph.D., Assistant Professor, English and Cultural Studies, McMaster University

Sarah Brophy, PhD, Professor, English and Cultural Studies, McMaster University

Susie O'Brien, Ph.D., Associate Professor, English and Cultural Studies, McMaster University

Lorraine York, Ph.D., Professor, English and Cultural Studies, McMaster University

Elisabeth Gedge, Associate Professor, Department of Philosophy, McMaster University

Grace Kehler, Ph.D., Associate Professor, English and Cultural Studies, McMaster University

Suzanne Mills, PhD, Associate Professor, School of Labour Studies and Geography and Earth Sciences, McMaster University

Maroussia Ahmed, PhD, Professor Emerita, Department of French, McMaster University

Susan Fast, PhD, Professor, English and Cultural Studies, Director, Graduate Program in Gender Studies and Feminist Research

Stephen Heathorn, PhD, Professor, Department of History, McMaster University

Isik Zeytinoglu, PhD, Professor, DeGroote School of Business, McMaster University

Adam Hitchcock, PhD, Professor, Department of Chemistry & Chemical Biology, McMaster University

Christine Quail, PhD, Associate Professor, Department of Communication Studies and Multimedia, McMaster University

Jane Aronson, Professor, School of Social Work, McMaster University

Stuart Mestelman, Professor Emeritus, Department of Economics, McMaster University

Michael Kliffer, Associate Professor, Department of French, McMaster University

Sean Corner, Associate Professor, Department of Classics, McMaster University

Bill Prestwich, Professor Emeritus, Department of Medical Physics and Radiation Science, McMaster University

Andrew Gilbert, Assistant Professor, Department of Anthropology, McMaster University

Gerald Chapple, Retired Associate Professor of German, (former) Dept.of Languages and Linguistics

Michelle Dion, Associate Professor, Department of Political Science, McMaster University

Cecile Fradin, Associate Professor, Department of Physics & Astronomy, McMaster University

Anne Savage, PhD, Associate Professor, Department of English & Cultural Studies, McMaster University

Joseph B. Rose, Professor, DeGroote School of Business Mcmaster University

Walter Smyrniw, Professor Emeritus, Department of Linguistics & Languages

John E. Greedan, Professor Emeritus, Department of Chemistry and Chemical Biology, McMaster University

Marek Niewczas Ph.D., P.Eng., Professor, Department of Materials Science and Engineering, McMaster University

Harvey A. Feit, Ph.D. Professor Emeritus, Department of Anthropology, McMaster University

Karin R. Humphreys, Ph.D. Associate Professor, Department of Psychology, Neuroscience & Behaviour, McMaster University

Tina Moffat, Ph.D. Associate Professor, Department of Anthropology, McMaster University

Marie Elliot, Ph.D. Associate Professor, Department of Biology, McMaster University

Nancy B. Bouchier, Ph.D., Associate Professor, Department of History, McMaster University

Appendix C: Comparison of Divestment Movements

1970s—1994: Divestment from Apartheid South Africa
Socially responsible investment gained increased attention with the rise of the social movement against South African apartheid. Universities were pressured by student campaigners to divest from companies operating in South Africa. This came after the Sullivan Principles (rules aimed at making foreign company operations compatible with non-discrimination) did not lead to social and legal change. Divestment was seen by its supporters as a necessary and bolder option.
Basis for divestment: Human rights (Racial discrimination).
Success in uptake: Medium. Divestment campaigns were large and active for multiple years at many North American universities. In some cases (Harvard, Yale, University of Toronto), universities took partial steps such as continuing to invest in 'more socially responsible' companies in South Africa, resulting in continued student protests in favour of full divestment. Some universities changed their decisions after multiple student campaigns pushed for complete divestment, not inaction or partial measures.
Success in effects: High.***** The claim is often made that South Africa divestment had no impact because it did not financially harm or directly affect the share prices of the companies involved (e.g. Teoh, Welch and Wazzan 1999). It is also difficult to separate the impact of divestment alone from the broader boycott of South African products and of sanctions on the country, both more financially harmful steps that came after years of divestment campaigning. Although some institutions rejected divestment, the size and tenacity of the campaign played a role in promoting public awareness of the injustices. It is possible that divestment had an effect on political change, even if there was no direct financial impact. Qualitatively, prominent South African political figures have named university divestment, signalling international disapproval, as one crucial factor (along with domestic activism) that resulted in regime change.

Shareholder engagement was also commonly proposed as a response to apartheid; shareholder requests frequently asked companies to completely disengage from South Africa (Broyles and Aflatooni 1999, 17). One notable difference with fossil fuel-related engagement is that the main shareholder request is different: ending a company's operations in one location, accounting for 'typically' less than two per cent of company sales (anti-apartheid; Broyles and Aflatooni 1999, 25), compared to transforming a company's main line of business (anti-fossil fuels).

*****In all cases, judging the effectiveness of divestment is difficult because there is no counterfactual information about what changes would have happened in the absence of a divestment movement.

1970s-2000s: Anti-Tobacco Divestment
As a growing amount of scientific evidence linked smoking to cancer, universities were pressured to stop investing in an industry where 'using the products as intended kills over 50% of long-term users' (Girard 2007). Misinformation campaigns and 'delay tactics', such as companies continuously arguing more research was needed, were also named as reasons to divest.
Basis for divestment: Health (Industry product causes health harms).
Success in uptake: High. Although the anti-tobacco campaign was smaller and less vocal than others, it had widespread success following from minimal campaigning: Harvard and City University of New York divested in 1990, followed by others. Changing norms (and evidence) are seen in some reversals of decisions: University of Toronto rejected tobacco divestment in 1991 but endorsed it in 2007.

Success in effects: Low. Tobacco companies remain large and highly profitable, mostly due to population growth as smoking rates have declined or plateaued in most countries. The industry has lost some social acceptability and laws have become more restrictive (bans on public smoking, graphic warnings on cigarette packs) but it is unclear if divestment played any role in shaping public disapproval of the industry – as opposed to media information or personal experiences with smoking-related harms.

1990s-2000s: Anti-Sweatshop Campaign

Anti-sweatshop activism has had less of a presence in the divestment debate than other social movements of recent decades. The issue receives media attention periodically and some institutions have changed their procurement policies to discourage sweatshop production, but there has been little change to investments.

Basis for divestment: Human rights (Labour rights and workplace safety).

Success in uptake: Low (among both institutions and individuals in their buying choices).

Success in effects: Low (sweatshop-using apparel and technology companies remain predominant).

2000s: Divestment from Sudan

In the mid 2000s, government-sponsored genocide led some investors in Sudan's oil fields to remove their funds, since oil revenues were supporting the government's actions.

Basis for divestment: Human rights (Genocide).

Success in uptake: High, especially given the short campaign and the resistance of some universities to divestment in most circumstances (Yale, Queen's University).

Success in effects: Low. Less scrupulous investors replaced those that left.

2000s-2010s: 'Boycott, Divestment, Sanctions' (BDS)

Throughout the 2000s, a movement to condemn Israel's actions in occupied Palestinian territories has gained some support on campuses and in student assemblies.

Basis for divestment: Human rights (Political rights and other discrimination). However, critics of BDS see the singular focus on Israel as unjustified and/or anti-Semitic, since other countries accused of committing human rights offenses do not receive the same attention. This divestment movement is unlike others because both sides are claiming the moral high ground.

It is also unique in calling for an academic boycott, on work produced at Israeli universities. This is widely rejected by universities as a contravention of their main social purpose. For example, McMaster's Social Responsibility and Investment policy states that the "primary social responsibility of the University is to fulfill its role as a centre of learning and free inquiry." Although the movement's most prominent leaders denounce anti-Semitism, there have been many instances of discriminatory comments and actions from supporters of both sides of the campaign, such as scholars of Israeli nationality (not institution) being targeted by the boycott. For these reasons, many people (including McMaster's President in an official statement, 4 April 2014, http://dailynews.mcmaster.ca/worth-mentioning/statement-from-the-president/) find that the movement contributes to an atmosphere of religious and ethnic tensions, phobias and hatred.

Success in uptake: Virtually none. Some student bodies and academic associations have voted in favour of BDS, but the academic boycott component is seen as a basic contravention of academic freedom, and so despite hundreds of campus campaigns globally, only one university has divested (Hampshire College, US).

Success in effects: No clear effect as divestment has not been widely adopted.

2010s: Anti-Private Prisons

An anti-private prison movement has emerged in the US, where incarceration rates have risen sharply since the 1990s.

Basis for divestment: Human rights violations documented in private prisons.

Success in uptake: The movement is still very new and there are few active campaigns. Columbia University has committed to divest.

Success in effects: No clear effect as divestment has not been widely adopted.

2010s: Fossil Fuel Divestment

The 'fossil free' movement is most similar to the anti-tobacco movement because of its scientific evidence base. Political and human-rights-based campaigns, in contrast, are based on moral views of the world that are more subjective. However, in either case it is difficult to establish where to draw the line of disapproval, given that many industries cause some form of social harm and many governments could be criticized for some form of contravening human rights. Practical guidance on how to draw this line, including considerations of majority support in the university community, is set out in the influential Yale University Press work *The Ethical Investor* (Simons et al. 1972) but there is inevitably some level of subjectivity involved.

Basis for divestment: Health (Human health harms caused by product, both locally and globally, as well as possibly irreversible environmental and ecosystem harm)

Success in uptake: Virtually no success in Canada (only partial diversion of endowment funds at UBC and Concordia), but some support in the US, UK and Australia. Divestment commitments have often been more limited than campaigners have asked for: such as in partial divestment (from coal and oil sands only) or direct holdings only, with indirect investment pools ignored.

Success in effects: No clear effect as divestment has not yet been widely adopted by universities, although a growing number of institutions are divesting holdings (552 as of 16 August 2016, and an up-to-date list is maintained at http://gofossilfree.org/commitments/). Media attention has been paid to university decisions, and fossil fuel company associations are promoting anti-divestment news articles, longer reports and websites (such as divestmentfacts.com or reports from policy institute Compass Lexecon). The existence of these materials indicates some concern about the power of the campaign. The anti-divestment materials generally focus on the perceived costs of divestment, using assumptions that past profits in fossil fuels will continue and that compliance, management and/or transaction costs will also harm university finances.

Appendix D: Canadian University Divestment Decisions

The following table is based on a review of 33 fossil fuel divestment campaigns at Canadian universities presented to the President's Advisory Committee on Fossil Fuel Divestment by CFO Deidre Henne on 4 March 2016, and updated as of 1 August 2016. "In progress" indicates that either the administration or the student campaign is still active in regards to divestment; and "--" indicates no information was available.

University	Campaign Start Date	Divestment Decision	ESG Decision, Other Actions	Reasoning for Decision and Additional Notes
Queen's University	Nov. 2014	No (Nov. 2015)	ESG consideration has been 'permitted' since 2009, but not required of fund managers.	Reasoning: divestment not effective; could undermine research partnerships and donor relationships; fossil fuels do not cause social injury because of the social benefits they provide and because the industry is not illegal. (This reasoning refers to the 'Yale definition' of social injury (Simons et al. 1972) which has been criticized for being too legalistic. Divesting would 'do nothing' about fossil fuel demand or developing alternative energy sources. http://www.queensu.ca/principal/speeches-writing/statements/divestment-fossil-fuels
University of Ottawa	Oct. 2014	No (Apr. 2016)	The university is a UN PRI signatory and implements ESG.	Based largely on the Hebb (2015) report, divestment is presented as 'insufficient on its own' and ineffective compared to shareholder engagement. https://www.uottawa.ca/administration-and-governance/board-of-governors/addressing-global-warming https://www.uottawa.ca/administration-and-governance/sites/www.uottawa.ca.administration-and-governance/files/report_of_the_finance_and_treasury_committee_to_the_board.pdf
University of Waterloo	Jan. 2016	In progress	ESG evaluation is permitted but not required of fund managers in a new	http://m.waterloochronicle.ca/news-story/6271245-divestment-bid-gets-cool-response-at-university-of-waterloo

			investment policy announced in Jan. 2015.	https://uwaterloo.ca/secretariat-general-counsel/sites/ca.secretariat-general-counsel/files/uploads/files/sipp2015-01-01_002.pdf
University of Toronto	Mar. 2014	No (Mar. 2016)	Will begin using ESG, consider signing UN PRI, the Montreal Carbon Pledge and joining the Carbon Disclosure Project. Additional actions: "• Launching a tri-campus clean-tech challenge to encourage environment and energy-related entrepreneurship • Providing $750,000 to be distributed over three years for climate-change related academic initiatives • Prioritizing climate change-related themes in selected programs and curricula • Increasing the Utilities Reduction Revolving Fund by 50 per cent (from $5 million to $7.5 million) to encourage more extensive implementation of energy-saving retrofits in our buildings • Formally adopting substantially more rigorous energy efficiency standards for capital projects • Pursuing opportunities to use our campuses as 'test beds' for environmental and	The president went against fossil fuel advisory committee recommendation, which was targeted divestment from companies that 'blatantly disregard' climate limits. The university has direct holdings as well as indirect investments. The university's "most valuable and effective contirbutions" are through research and education. Advisory committee report: http://www.president.utoronto.ca/secure-content/uploads/2015/12/Report-of-the-Advisory-Committee-on-Divestment-from-Fossil-Fuels-December-2015.pdf President's decision: http://www.president.utoronto.ca/secure-content/uploads/2016/03/Beyond-Divestment-Taking-Decisive-Action-on-Climate-Change.pdf

			sustainability research and best practices • Investigating the potential for development of other renewable energy projects • Establishing a U of T committee on the environment, climate change, and sustainability with a mandate to coordinate and advance U of T's environmental research, innovation, education, and energy consumption initiatives."	
McMaster University	Oct. 2015	In progress	Already requiring fund managers to apply ESG (since 2013) and is developing specific requirements for ESG, such as asking fund managers to provide verbal (and now written) explanations of why they hold any investments in fossil fuels.	--
University of British Columbia	--	No (Feb. 2016)	Implementing ESG within 3 years.	Partial divestment of $10 million (out of a $1.45 billion endowment). Investment policy was replaced during the divestment campaign, which drew some criticism. There are now 5 criteria to meet for divestment. Engagement with industry is considered preferable to 'symbolic' divestment that may have no beneficial effect. http://treasury.ubc.ca/responsible-investment/ubc-endowment-responsible-investment-policy/

				http://www.cbc.ca/news/canada/british-columbia/ubc-board-of-governors-votes-against-divestment-from-fossil-fuel-industry-1.3317816
University of Alberta	--	--	--	--
University of Calgary	--	No	--	http://www.theglobeandmail.com/news/national/canadian-medical-association-divesting-fossil-fuel-holdings/article26115904/
University of Saskatchewan	Dec. 2014	--	--	--
University of Manitoba	Apr. 2015	In progress	--	--
McGill University	Fall 2012 (1st campaign) Oct. 2015 (2nd campaign)	No (May 2013); No (Mar. 2016)	-- ESG and socially responsible investment will be expanded. Actions include: "-investing in renewable and alternative energy -establishing a socially responsible investment fund option for donors, -developing and implementing environmental, social and governance (ESG) principles and guidelines for endowment investments -supporting and initiating shareholder resolutions to encourage changes in company practices deemed inconsistent with ESG and the United Nations' Principles for Responsible Investment (UNPRI)"	-- In both campaigns, the existence of 'social injury' according to McGill criteria was not established. Divestment criteria were not met because the majority of carbon emissions come from end uses of the fossil fuel industry's product. Preparing a report on socially responsible investment, target date December 2016. Reviewing all sustainability-related activities in order to develop a "comprehensive climate action plan." http://publications.mcgill.ca/reporter/2016/03/camsr-reports-on-divest-mcgill-submission/ https://www.mcgill.ca/boardofgovernors/files/boardofgovernors/gd15-44_camsr_report.pdf

Dalhousie University	Feb. 2014	No (Nov. 2014)	No sustainable investment actions.	Named shareholder engagement as a reason not to divest (as well as: limited impact due to small holdings, higher transaction costs) Ongoing sustainability research and campus emissions reductions. http://www.dal.ca/news/2014/11/26/dal-board-decides-not-to-divest-its-fossil-fuel-endowment-holdin.html
University of Victoria	Jan. 2014	No (Jan. 2016)	The university has become a UN PRI signatory and is piloting a $25,000 'fossil free' fund.	The investment management foundation is considered separate from the university, and is developing an approach to responsible investment. https://ring.uvic.ca/news/foundation-creates-fossil-fuel-free-fund
Kwantlen Polytechnic University	Oct. 2013	No (Apr. 2014)	--	Research from HSBC and RBC indicated there would be little financial impact from divestment but the board declined to divest. Some students criticize the potential conflict of interest in having board members employed by oil and gas companies rejecting the divestment motion. http://runnermag.ca/2014/12/kwantlens-board-of-governors-declines-divestment-initiative/
Capilano University	--	In progress	--	--
Simon Fraser University	Fall 2013	No (Jul. 2014)	UN PRI signatory since 2014. Investment managers are "encouraged" to sign UN PRI, engage with companies on ESG factors.	University needs to avoid "inadvertent damage" to energy companies that "may be part of the solution." (Perhaps referring to their natural gas or renewable energy operations). Engagement is considered better than screening. https://www.sfu.ca/university-communications/media-releases/2014/sfu-adopts-investment-policy-grounded-in-united-nations-principles-for-responsible-investment.html
UBC—Okanagan	Oct. 2014	(Same as UBC)	--	--

University of Winnipeg	Jan. 2015	No (June 2016)	University board of regents voted to create a responsible investment policy applying ESG criteria in assessing investments. A '100 per cent fossil fuel free' fund aimed at 'green innovation' was also requested by the board.	"UWinnipeg has adopted a balanced approach to the divestment issue which is consistent with actions taken by other universities in Canada." The decision was opposed by some students as incompatible with its sustainability and social commitments. http://www.cbc.ca/news/canada/manitoba/divest-u-winnipeg-disappointing-1.3656084
Lakehead University	Feb. 2014	In progress	--	--
University of Guelph	Apr. 2014	No (Jan. 2015)	Exploring UN PRI practices. A preliminary review found that most other universities are 'just beginning to take concrete steps' in responsible investing.	http://www.guelphmercury.com/news-story/5731744-university-of-guelph-explores-responsible-investing-/
Ryerson University	2015	In progress	--	--
York University	Sept. 2014	No (Jan. 2016)	--	York does not have direct holdings, and the Chief Finance Officer says the investment policy 'does not recommend' negative screening. http://www.excal.on.ca/all-eyes-on-york-after-major-uoft-divestment-developments/
Trent University	Mar. 2013	No (May 2015)	The Board is seeking to make up to 10% of investments compatible with socially responsible investment principles, based on UN PRI.	Trent prefers 'research and engagement' with companies to divestment. The decision was also intended to balance different points of view. http://www.trentu.ca/newsevents/newsDetail_old.php?newsID=9690
Carleton University	Oct. 2014	In progress	In progress	Professor Tessa Hebb views divestment as ineffective because university holdings are too small to make a symbolic impact and because there is no financial impact (Hebb 2015; http://www.charlatan.ca/2016/01/divestment-debate-places-students-against-academics/)
Concordia University	Fall 2013	No (Nov. 2014).	No	Partial divestment of $5 million.

				In Feb. 2016, the university is considering expanding the scope of its sustainable investments. http://www.concordia.ca/cunews/main/stories/2016/02/09/concordias-sustainable-investment-initiative-the-next-stage.html The endowment fund investment pool is worth $155 million as of April 2015. https://www.concordia.ca/content/dam/concordia/aar/docs/foundation/2014-15-Concordia-University-Foundation-Annual-Report.pdf.pdf
Université de Sherbrooke	Feb. 2015	In progress	--	The divestment group is still active. https://www.usherbrooke.ca/developpement-durable/vous-etes/etudiant/implications-etudiantes/
Saint Francis Xavier University	--	In progress	--	--
University of New Brunswick	Oct. 2014	--	--	--
St. Mary's University	June 2014	In progress	--	--
St. Thomas University	--	--	--	--
Mount Allison University	Nov. 2014	In progress	--	--
Memorial University	2013 (!st campaign) Oct. 2015 (2nd campaign)	--	--	The university president names the ethical investment policy as a 'good policy' in response to divestment pressures – critics pointed out that no investment policy exists. http://theindependent.ca/2015/05/04/mun-faculty-support-divestment-president-defends-big-oil/
University of PEI	Dec. 2015	In progress	--	http://www.cbc.ca/news/canada/prince-edward-island/upei-fossil-fuel-investment-1.3359000

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