



Report to the Dalhousie Investments Committee

Divestment Impacts:

A collaborative report by Divest Dalhousie

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Abstract

This report describes the impacts divestment from the 200 companies with the largest holdings of fossil fuel reserves will have on climate change and the fossil fuel industry, as well as the long and short-term benefits incurred by Dalhousie.

Introduction

This is the second report submitted to Dalhousie University's Investment Committee, after an initial report addressing questions about the extent of divestment, and delves into several areas about what divestment actually accomplishes. The goal of this report is to abolish the hyperbole that is often found in mainstream media pieces regarding divestment and the intentions of those that wish to enact pressure on the fossil fuel industry, by demonstrating the impact of divestment movements as social change makers and what divestment offers as a means of action on climate change.

The Carbon Bubble and University Sustainability: A primer on the need for action

Many of the arguments for fossil fuel divestment, both ethical and financial, are based on a concept commonly referred to as the carbon bubble. This section briefly explains the carbon bubble and why Dalhousie University should be concerned.

Anthropogenic greenhouse gas emissions cause climate change, negatively affect our health (Patz, Gibbs, Foley, Rogers, & Smith, 2007; Woodward et al., 2014) and are dangerous to our economic well-being (Stern, 2008). The global scientific community is in near unanimous agreement on climate change (Doran & Zimmerman, 2009), and the IPCC has suggested that, if a rapid shift to a low-carbon future does not take place soon, we will compromise the ability of future generations to meet their needs (Woodward et al., 2014). For this reason, considerable effort has gone into tracking carbon and setting limits for carbon emissions that will keep the global temperature from rising more than two degrees Celsius. It is estimated that no more than another 565Gt of CO₂ can be burned between 2010 and 2050 before this threshold is broken (Meinshausen et al., 2009). This figure provides a global carbon budget of the highest limit of carbon that humans can burn while maintaining a habitable climate. Proven reserves of carbon in the form of coal, oil, and gas are far greater than our available carbon budget. Estimates put proven global carbon reserves around 2795Gt CO₂ – almost 5 times our 2010 to 2050 carbon budget (Carbon Tracker Initiative, 2011).

The massive gap between the carbon budget and the proven carbon reserves creates a very real problem for humanity. If we burn more carbon than the budget allows, we will end up with a drastically different world than the one we know today. We will also leave future generations with a world that is less hospitable than the one we have the privilege to know. This is profoundly unjust.

Currently, the top 100 publicly traded oil companies and the top 100 publicly traded coal companies hold enough carbon to surpass the global budget and then some. An estimated 740Gt CO₂ are held by these companies, enough to propel the earth's climate well above the recommended 2°C. Current market architecture allows for governments and corporations to treat carbon reserves as assets regardless of their global warming potential. If humanity is to maintain a reasonable level of climate change, then global carbon emissions must be limited through regulatory means (Favero & Cruciani, 2009).

If the global community is to take real action to combat climate change, it will be forced to limit carbon emissions beyond 565Gt CO₂ between now and 2050. This means that the remainder of proven carbon reserves will become 'stranded assets' and lead to financial vulnerability of the companies holding those assets and any institutions that are still invested in them. This is the carbon bubble.

Divestment as a Tool for Change

Successful Divestment History

Divestment has entered the common lexicon with the popularity and prominence of the fossil fuel divestment movement. To date, thirteen colleges and universities, 29 cities, two countries, 28 foundations and eight other institutions have divested from fossil fuels. There are currently more than 300 active divestment campaigns at North American universities. However, the idea of divestment did not originate in the environmental and climate movement.

South Africa

Divestment first became a tool for change in the 1960s as faith-based groups sought ways to engage with Apartheid rule in South Africa. These groups, mostly located in North America and Europe, tried numerous methods to push their own governments into action and to fight the injustice of a racially oppressive system. They found that, while other methods had proved ineffective, economic pressure could directly influence a repressive regime halfway around the world. The South African economy at the time was dependent on foreign loans and investment, with approximately \$14 billion in United States involvement and 350 American businesses operating there. In the wake of the civil rights movement, many Americans were galvanized by a political system in which a minority of whites ruled with economic, military and legal force over a majority of blacks. Church groups led the first call for divestment, but that call was soon picked up by students.

After the 1976 Soweto Massacre, students rallied and protested at universities and colleges across the continent. Schools demonstrated solidarity with South African students as awareness and concern about apartheid rule grew. Between 1977 and 1989, 167 educational institutions divested from Apartheid South Africa. The campaigns found success on both sides of the border; in Canada, Carleton, McGill, the University of Toronto, and York were the largest institutions to divest from South Africa (Fonseca, 2010). Although student activists spearheaded campaigns, “citizen groups around the world put pressure on universities and corporations to divest their holdings from companies working in South Africa” (Hallward & Shaver, 2012, p. 392). In January 1986, The Dalhousie Board of Governors unanimously endorsed divestment of the Dalhousie endowment. The BOG was urged to do so by advocates for divestment including faith leaders such as Desmond Tutu (currently advocating for divestment from fossil fuels) and even Nelson Mandela himself. Accompanying these leaders in the push for divestment was a student led petition with 1545 signatures (Dalhousie Board of Governors, 1986). Dalhousie’s divestment of South African holdings lasted until 1994 after the successful end of apartheid (Dalhousie Board of Governors, 1994).

While the end to apartheid in South Africa didn’t begin until 1990 after the election of a new president, Nelson Mandela cited the United States’ university divestment movement as a key turning point in the anti-apartheid movement (Stephenson, 2013) and researchers like

Soule (2008) have concluded that international financial pressure was critical to ending apartheid.

Divestment became a tool for those geographically distant from South Africa to demand change. Monetary mechanisms outside the physical boundaries of a nation or regime allowed for global influence. As the impacts of (and solutions to) climate change also belie borders, divestment is an important tool for international action.

The most obvious similarities between the anti-apartheid and fossil fuel divestment campaigns is the targeting of intermediate bodies, specifically universities and colleges, to impact more distant corporate and state opposition and reach a broader audience (Gosiger, 1986). This is, in part, because unlike corporations, schools, especially public institutions, have a responsibility to be accountable to their student body. Anti-apartheid and fossil fuel divestment campaigns both received civil society support; with prominent public figures speaking out in favour of divestment and attracting continued media attention throughout the campaigns.

Another interesting facet for comparison is the way in which the movements spread both considerably quickly and with amplified momentum once the first institution began to divest. Soule's (1996) research describes how "universities imitated the divestment decisions of universities like themselves on various dimensions (eg. Prestige and institutional type)" (p. 2), which suggests that once the first institution of Dalhousie University's size and kind accepts fossil fuel divestment, others will be quick to follow. This means it is imperative for Dalhousie to act quickly if it intends to claim the benefits of being an international sustainability leader.

In a final note of comparison, divestment appears as a local campaign with local targets, but it has transnational influence (Hallward & Shaver, 2012). Both campaigns chose a narrow scope and specific targets in order to increase the feasibility of their goals, and, despite these limitations, contribute to a dynamic movement through many small changes.

Divestment is a social awareness campaign that helps inform and progress the social movement in which it is situated. Bernard-Herman from the Roundtable on Student-Led Fossil Fuel Divestment Movement explains this impact by saying "divestment is one part of a broader strategy...alone it will not fix the problem. But as one component of a larger

broad-based movement that can put pressure on other stakeholders, divestment becomes an incredibly effective strategy” (Stephenson, 2013, p. 98). This scaling up of impact as local divestment initiatives garner international recognition (Hallward & Shaver, 2012) reflects the tagline often attributed to grassroots movements: ‘think global, act local’. Soule (2008) provides this analogy: “we can see how this localized movement...can have profound effects at a more systemic level” (p. 35). This scaling up is made possible by the network of local, regional, and international associations for divestment that together create a global social movement (Hallward & Shaver, 2012).

Tobacco

Following the success of divestment from South Africa in the 1980s, activists turned to the tactic again in the 1990s to challenge the power of tobacco companies and the health hazards induced by smoking. Divestment threatened the industry’s share value, publicized its controversial behaviour, and developed its reputation as a politically unacceptable ally. Beyond the impact of financial divestiture, the campaigns created public debate and drew societal attention to the issue, thus playing a large and visible role in influencing public health and social policy making (Malone & Wander, 2006). The movement to divest from tobacco has been less prolific, but it has won considerable success. To date, six states, ten municipalities, and nineteen colleges and universities have restricted or divested their stocks from tobacco company holdings (Council for Responsible Public Investment, 2014).

Among the largest institutions to divest were Harvard and Stanford. Reflecting on the decision, John F. Powers, chief executive of Stanford Management, which manages the university’s endowment fund, said that divesting from tobacco had no adverse impacts on their performance. Tobacco stocks “are a narrow universe” and “plenty of other stocks went up.” This draws an important parallel to current fossil fuel divestment campaigns. At Dalhousie University in particular, fossil fuel stocks make up only 4.3% of the endowment. As evidenced elsewhere in this document, removing those stocks and investing in other areas, such as renewable energy, would promote an increase in the performance of the school’s endowment fund.

Also of note is that both apartheid and tobacco divestment movements encountered the same argument commonly used against fossil fuel divestment campaigns: fiduciary responsibility prohibits divestment, as it obligates institutions to maximize their return on investments. This is often interpreted as a legal responsibility to maximize profits at the expense of other factors. This is inaccurate, as evidenced by the many institutions and organizations, in both Canada and the United States, that have taken steps to align their investment and values – whether based on Apartheid, tobacco, climate change, or other forms of social and environmental injustice. Furthermore, the fiduciary responsibility to act in the interest of stakeholders requires a commitment to future students and intergenerational equity, promoting long-term stability over unsustainable short-term gain.

Schools also have a mandate to consider broader social, environmental, and ethical factors as opposed to a sole focus on increasing economic profit. This points to a key difference between divestment and forms of shareholder engagement, as outlined below. Divestment was a response to the challenge of a physically distant but emotionally close issues that gave an access point to concerned citizens from around the world through globalized economics.

Divestment Versus Shareholder Engagement

Sometimes shareholder resolutions are effective avenues for change, but the fossil fuel industry is different. Their business plan hosts an inherently conflict in that it revolves around burning five times the maximum limit of carbon established as that which will keep global climate change from surpassing two degrees Celsius. Shareholder resolutions that limit potential profits for a corporation are often thrown out before even going to a vote by the SEC. Shareholder resolutions also exclude the public and thus have little impact on broader public policy and perception.

Due to the urgency of the problem, divestment is a more effective approach. Divestment campaigns work in part by removing the social license that will allow the companies to continue to burn that carbon. Our institutions must draw a hard line against an

industry whose actions result in the degradation of communities across the planet and the destabilization of our climate.

The Direct Impacts of Divestment

Fossil fuel Companies

The impact of divestment on fossil fuel companies is difficult to determine because many factors lie beyond the control of the university itself. The most probable direct impacts on the fossil fuel industry will be public stigmatization and external pressure to shift operations towards 'greener' energy production over the short and long-term. One thing is clear: small changes can eventually lead to a big impact, which is evidenced by the example of South African divestment.

Through our communications with the IC, it is Divest Dalhousie's understanding that 20.3 million dollars of the endowment is invested in the top 200 companies with the largest carbon reserves in the world. Divestment would only apply to these select funds (about 4.3% of the endowment). Stanford, on the other hand, recently announced a complete divestment from coal mining companies, a divestiture of \$18.7 billion over 5 years. With just over \$20 million, Dalhousie is far from a major investor in the top 200 companies; any financial impact of Dalhousie's divestment on the companies will be marginal. Of far greater consequence is the social impact of divestment.

Social impacts on the fossil fuel industry have already begun. From the considerable momentum of divestment campaigns around the world, particularly in the United States institutions, to the consistent departure from coal based power, to the banning of hydraulic fracturing in Nova Scotia: the stigmatization of burning fossil fuels is happening at this moment, and taking action against climate change is becoming the norm. Climate activism is at an all time high, with over 400,000 attendees at the People's Climate March in New York City on September 21st. This depth of engagement will lead to increased political will, followed by stricter regulations and reduced subsidies on fossil fuel extraction. Coal companies, which make 100 of the 200 listed companies with the largest fossil fuel

reserves, are becoming an example of this stigmatization process, both through carbon regulation and certain divestment campaigns that distinguish coal from other fossil fuels. It is important to note that institutions that divest from coal alone have already set the path for further fossil fuel divestment and will most likely do so. The effect of this will be still greater risk to investments in the industry.

For fossil fuel companies, divestment represents a reduction of influence on campuses. It revokes the social license of the industry to continue practices that will lead to catastrophic climate change. It is at once both an institutional and a public stance, one that articulates the school's direction and values while building momentum for a greater societal change. By choosing to divest, universities send a clear message to students, alumni, donors and the public that they are leaders in sustainability. The community at large has sent a message of its own: schools like Unity College in Maine have reported increased interest in and donations to the school since divesting (Mckibben, 2013). The most important part of divestment, however, is the public statement that institutions make by committing to divestment: business as usual will not be tolerated and that change and innovation need to be accelerated before we return the social license to these companies.

Climate Change

To begin the discussion on the direct impacts of divestment on climate change, it is necessary to consider the time scale by which these impacts will take place. The divestment commitment and its implications over four years will have considerable effect on how deep and widespread the impacts on climate change are in the future. As momentum builds behind divestment across the world there will be a point at which direct impacts can be linked to divestment campaigns. These links will be made to the first few groups who have committed to divestment, paving the way for more to follow. The question of divestment's potential of reducing CO₂ production tomorrow is naïve; divestment deserves nuanced consideration rather than blunt criticism.

A direct quantitative analysis in the reduction of CO₂ on a day-to-day basis from the point of divestment of Dalhousie's \$20.3 million would be virtually impossible to calculate due to the complexity and scope of linking market dollars to CO₂ output in such a

manner. Over the course of the next 50 years, the divestment movement will be seen as one of the turning points for 21st century in taking climate change seriously. There will almost certainly be research and analysis of divestment's impacts as those impacts begin to widen and deepen.

Already, there is a growing body of literature on the effects of climate change on spending and investment habits, as well as what a growing divestment movement will look like in the near future. The stigmatization of the fossil fuel industry will lead to serious public considerations about the moral implications of dependence on the extraction, refinement, and consumption of fossil fuels. This in turn will create greater public demand for safer, cleaner technology.

Climate change and how we begin to deal with it is the defining challenge of multiple generations. While the direct link between GHG reeducation and money withdrawn is a doctorate worth of research, the message and cultural shift that divestment spreads will have far reaching impacts on GHG production over all.

Consumption and Behaviour Trends

Dalhousie University, due to holding influence in a number of communities of various scales, can have an effect on consumption and behavior trends through divestment. The decision to divest, or not to do so, will effect the perception of Dalhousie as a leader in sustainability. Additionally, it is a statement that will alter the general perception of fossil fuel use in communities at Dalhousie, in the HRM, and in communities associated with other universities or institutions grappling with the question of divestment. Deciding to leave investments in companies with carbon reserves does not challenge the environmentally damaging activity of the fossil fuel industry; it condones their activity, albeit implicitly. A decision to divest, however, would be a statement supporting the importance of taking action to solve our burgeoning environmental problems, and in line with the consensus of the scientific community to which this research institution contributes.

The impact that Dalhousie can have on consumption and behavior trends is based on divestment's ability to raise awareness and prompt discussions about fossil fuel use and climate change. Interest in these conversations is already growing on campus and beyond

as communities are spurred by the local relevance of climate change issues and international momentum. Framing the divestment discussion with the support of a prominent institution situates Dalhousie as a leader in these community discussions with the opportunity to influence social learning. Faiers, Cook, and Naema (2007) cite the importance of values, general learning, and social learning in determining consumer decisions with regards to energy use. Similarly, a number of researchers, including Biel and Dahlstrand (2005), Wheale and Hinton (2007), and De Pelsmacker, Dreisen, Rayp (2005) have identified cultural barriers such as habits and availability of information in the process of making environmentally sound consumer choices. Dalhousie's divestment would further raise awareness about environmental issues in peripheral communities, which in itself could reduce energy consumption (National Round Table on Environment and the Economy, 2012). The social understanding of damages accrued by gross fossil fuel consumption would partly be framed by the action Dalhousie is taking, and this may encourage individuals and other institutions to question their involvement with the fossil fuel industry. A decision to divest from the fossil fuel industry would set a precedent for challenging environmentally damaging activity and potentially encourage other individuals and institutions to change their consumptive patterns and investments to be more environmentally sound. Furthermore, the act of divestiture would engage the vast majority of the university's student body and faculty on the issue of climate change, deepening knowledge and personal connections to the issue. The reverberations of such profound engagement in both their individual roles and their broader roles in society would be immeasurable.

Public Policy

In a report prepared for the Greens/EFA Group - European Parliament, Weyzig et al. (2014) analyzes the outcomes of inaction on the imposed risks to conclusively determine that negative consequences will only increase. The risks involved in the rapid growth of the carbon bubble directly impact the decline in the value of companies in the fossil fuel industry. The feedback from the carbon bubble will most likely not be systematic, inferring

that concerns of risk to global economic financial instability should not be an obstacle in moving away from fossil fuel investments.

Public policy experts Favero and Cruciani (2009) state that the policies most likely to be implemented are either a 'carbon tax' or 'cap-and-trade'. But conversations about what policies best address climate change are not only occurring in research institutions, think tanks, and governments; they have also become a focal point for today's concerned citizenry. Research by Ansar et al. (2013) on previous divestment campaigns suggests that the actions and influence of universities, cities, and public institutions, comprised of such concerned citizens, can be instrumental in creating policy change. These institutions and organizations have historically been recognized as the largest force in bringing the issues on which divestment focuses to a global audience. Thus, Dalhousie holds considerable influence over public policy.

Although Dalhousie's removal of investments from fossil fuels may not be the sole factor in creating new public policy or revealing the risks to the global market, by indirect collaboration with other public actors (cities, institutions with public interest, etc.) who are also moving financial investments away from the fossil fuel industry, Dalhousie will be a leader in bringing these pressing concerns into the global sector and in helping to build foundations for future public policy.

Positive Impacts at Dalhousie: The Four R's

Our Reputation

At present Dalhousie University sits uncomfortably in the 'bad faith' position of having policies dedicated to sustainability and the stability of our climate (Sustainability Policy, Halifax Declaration, Talloires Declaration, UNEP International Declaration on Cleaner Production, Dalhousie University Sustainability Statement and The University and Colleges' President's Climate Change Statement of Action for Canada) while also having investments that only remain profitable if a global agreement to limit climate change is never realized. As a signatory of the Halifax Declaration, Dalhousie University is "entrusted with a major responsibility to help societies shape their present and future development policies and

actions into the sustainable and equitable forms necessary for an environmentally secure and civilized world". These commitments are in direct conflict with its investments in the fossil fuel industry, an industry that has plans to grow production, surpassing the global carbon budget. This plan will result in disastrous climate impacts.

Dalhousie should protect its financial investments from the risks associated with a carbon bubble; it should also act as "a model of long-lasting sustainable solutions" (Dalhousie University, 2009). Dalhousie's reputation depends on its ability to honour its commitments to the various declarations it has made. Investments in fossil fuels may not have been widely acknowledged as in direct conflict with Dalhousie's commitments to sustainability when signing the above declarations; however, it is increasingly transparent that Dalhousie is no longer living up to its commitments because of its investment portfolio. This will hurt the strong reputation of the university as well as the credibility of its graduates, professors, and staff.

Dalhousie stands to reap significant rewards for being a leader in sustainability if it chooses to divest from fossil fuels. A move as publicly significant as divestment would propel the institution onto the world stage, especially if it were the first University in Canada to do so. Divestment would also inject credibility into all schools and programs that have a commitment to sustainability, including the College of Sustainability, Environmental Studies, Engineering, Ocean Sciences, etc.

Returns

Divest Dalhousie has made it a central theme of their campaign that investments in traditional carbon based energy companies carry an elevated forward risk highlighted by increasingly competitive renewables, more stringent emissions legislation, and harder-to-extract carbon reserves. This combination makes up a large part of the carbon bubble previously described and exposes the Dalhousie endowment portfolio to a higher likelihood of lower overall returns in the coming years.

Some immediate evidence illustrating this issue can be found in a simple analysis of relative investment returns between equity baskets of Oil & Gas related companies vs. their primary home index. A first example can be found here in Canada, where the BMO S&P/

TSX Equal Weight Oil & Gas Index ETF (ZEO.TO) has delivered a 12.33% return since its inception on April 20th, 2010 through September 2nd, 2014. This compares to an overall return of 27.21% for the whole S&P/TSX Composite Index – a rate of return over twice as much as its oil and gas components held in the BMO ETF.

This trend is also noted in US based equities, where the heavily traded Energy Select Sector ETF (XLE) has trailed the returns of S&P 500 index. In this case, the five-year returns for the Energy Select ETF (which includes a broad base of large integrated Oil & Gas Companies, constituting large carbon reserves) were 81.12% between September 8th, 2009 and September 2nd, 2014, whereas the broader S&P 500 Index returned 92% over this same period.

However, an even more alarming statistic lays in the returns found within the Coal sector. During the same five-year period from September 8th, 2009 to September 2nd, 2014, Market Vectors Coal ETF (KOL), which tracks equity positions in the Coal sector within the United States, sustained a loss of -34.35% to its investors vs. the positive 92% return for the overall S&P 500 investor shown above. It has long been the contention of Divest Dalhousie that any investments in the Coal sector pose the most immediate danger not only for climate change and the environment but also for those seeking any sort of market competitive returns going forward. Given increasing emissions regulation and competition from renewables and natural gas (indeed, recent carbon targets set by the Obama administration were specifically targeted at the Coal Power Industry), the Coal sector will be the first to suffer the effects of the Carbon Bubble – a fact that may already be underway given the decreasing demand for coal based power in North America – leaving large integrated coal companies with quickly devaluing carbon reserves, something reflected in their dismal returns. In essence, the North American Coal Sector looks to be the canary in the mineshaft regarding a pending carbon bubble.

While the evidence on returns is compelling, it should be noted that it is not the belief of Divest Dalhousie that there is no potential investment value within the traditional carbon-based Coal, Oil, and Gas sectors – such a position would be naïve. Instead, Divest Dalhousie simply believes that the overall forward risks of such investments outweigh the rewards, especially given the negative environmental externalities derived from these industries. Furthermore, it is our recommendation that Coal-related investments be the first

equities from which to be divested, given their lackluster returns, poor demand outlook in North America, and extreme level of environmental degradation.

Given the relative strength of the broader markets, displayed in the superior returns seen in both the Canadian TSX and US S&P 500, we believe that selecting suitable replacements for companies in the Coal Sector would be comparatively seamless. First, there is a breadth of options within the greater home indexes that will offer suitable replacements in keeping with the endowment's Value at Risk goals. Second, the 100 companies in the Coal Sector on the list of 200 with largest fossil fuel reserves constitute a small percentage of the endowment's overall portfolio. Thirdly, given their poor performance over the past five years, these Coal Sector companies should have already been designated underweight status.

We are also not alone in this analysis: other leading Universities in North America with sizable endowments, such as Stanford, have already begun coal divestment; others, like the entire University of California system, are considering doing the same. Thus, we believe that this sector in particular offers the best entry into equity divestment for Dalhousie. In fact, we see it as critical, since this ailing industry looks only be encountering additional hurdles from large institutional investors willing to forego further investment, due to poor returns, increased regulation, and dangerous impact on climate, which itself poses a long-term dilemma to the entire global economy, thereby making it a danger to every other industry in which we invest.

Retention

Outside of the return on financial investments, fossil fuel divestment has proven to be a valuable social investment for universities and colleges. Divestment is too recent to place under the microscope of scholarly review (the first campus announced plans to begin the multi-year process in November 2012). However, the first schools to commit to divestment have already reported positive impacts to both student numbers and alumni donations. "After we divested we started receiving donations online," said Stephen Mulkey, President of Unity College in Maine, which was the first school in the United States to divest its holdings in fossil fuels, "We've seen an uptick in our inquiries from students. I think that will transform

into an improvement in enrollment.” (McKibbon, 2013). Sterling College found that the fall after divesting their endowment the school set record enrollment numbers (Sterling College, 2013).

Fossil fuel divestment conveys strong environmental leadership to prospective students, closer aligning commitment to sustainability policies with institutional practices. As divestiture becomes an increasingly common policy among post-secondary schools, the benefits of this perceived leadership will decline. With over 300 campaigns on campus across North America, divestment prevalence is sure to rise. Thus the biggest reputational gains will go to the early-adapters.

In the United States, student enrollment in environmental studies and science programs has “soared” (Galbrath, 2009). Employment of environmental program graduates has matched that growth, increasing at local, state and national levels (Hanover Research Council, 2009). One can anticipate similar findings in Canada.

Already, Dalhousie has a strong established reputation for its environmental programs and policies. Dalhousie made national headlines by opening the first College of Sustainability in Canada. On top of the initial publicity, the College of Sustainability has become another example of this growth. To date over 1500 students have taken a SUST class and over 456 are working towards the ESS Major. Since the programs’ inception enrollment has grown over 470 percent. 616 students took a SUST class in 2012/13, and at this point registrations for 2013/14 are comparable to last year at the same time. (Dalhousie University, Office of Institutional Analysis and Research, 2014)

As students pursue degrees environmental programmes, it is expected that they will prioritize leading schools in the field. By being the first school in the country to commit to divestment, it will demonstrate unparalleled leadership in Canada. One can expect this to attract a greater number of prospective students with an environmental interest. However, the publicity gained by divestment will likely attract students from other disciplines. When Dalhousie announces its commitment to divest from fossil fuels, it will make international news. Dalhousie’s brand and reputation will gain a huge reach, for extending that of paid advertising. This will likely increase retention too, as Dal stands alone as a national trendsetter.

Frequent objections to divestment concern the plight of students in Earth Sciences and Engineering, some of who will begin careers in the oil and gas sector. Divestment is not expected to have any adverse impacts on these populations. Research funding will stay stable, as companies fund universities based on the quality of research and students graduating these programs. Divest Dal has been careful to avoid and counter any attitude that stigmatizes students of any discipline. Divest Dal has members from economics, engineering, geology and dozens of other fields. It is the group's strong belief that students that wish to pursue a career in oil and gas should be supported and encouraged in their careers; climate change is a structural issue, not a personal one. By divesting and acknowledging the important work of students in these fields, Dalhousie can mitigate any potential negative impacts to them. By the same token, students of engineering, geology, economics, etc. who wish to pursue careers in fields that focus on climate change and sustainability solutions should also be given as much support and opportunity as possible, which may increase as investors see Dalhousie as an innovative sustainability leader. The net impact of divestment on Dalhousie is expected to be positive in both student enrollment and retention.

Research

As the leading research university in the Atlantic region, research is at the heart of what Dalhousie stands for and what Dalhousie does. The university receives a quarter of its annual operating expenses from research grants, totaling over \$140 million. Divestment from fossil fuels will not limit research opportunities at Dalhousie University or for Dalhousie researchers. The extent of divestment does not extend to the realm of research and Divest Dalhousie does not make any suggestions about from where Dalhousie University should solicit research funds, nor does it dictate the kind of research the university should undertake. It is however important to acknowledge that oil and gas research only makes up a fraction of the total research investment coming into Dalhousie University and to recognize the opportunities in other research directions. With a commitment to fossil fuels divestment comes an increase in credibility (see reputation section) as a true leader in

sustainability and a potential to increase research in the realm of climate change technologies and solutions, and sustainability more broadly.

As of April 2013, Dalhousie had identified four priority research areas as well as three areas of emerging strength in research. Commonly at universities, some research priorities are actually at odds with other priorities. Fossil fuels serve as a case in point, as many fields of research are actively investigating the negative impacts of anthropogenic climate change. Dominant research into the negative effects of climate change exists within all ‘research priorities’ and ‘emerging strengths’:

- Ocean studies
- Advanced Materials & Clean Technology
- Health & Wellness
- Governance, Society and Culture
- Information Science & Communication
- Agriculture & Food Technologies
- Energy & the Environment

Only one of the listed ‘emerging strengths’ is explicitly focused on energy, including fossil fuels. Dalhousie’s Strategic Research Plan calls for an evolution of the focus on oil and gas to a broader focus on ‘energy’ including research into ‘alternative and renewable energy sources’ and ‘climate change and the environment’. Out of the 32 research clusters listed within the above research priorities, only one is aimed at research into oil and gas – non-renewable energy (Dalhousie University Strategic Research Plan, 2013).

National research funding bodies have listed priority research areas that are increasingly focused on studying solutions to climate change and adapting to life in an altered climate. Academic freedom bars the university from prescribing research directions among faculty. However, targeting opportunities in sustainable technologies and climate change adaptation makes sense for attracting research dollars and meeting the universities sustainability commitments, namely “help[ing] societies shape their present and future development policies and actions into the sustainable and equitable forms necessary for an environmentally secure and civilized world”.

Concluding Messages

Dalhousie has yet to take strong, far-reaching actions against climate change. In the past, we have led by example through our declarations and signatories, our money spent on operations and improvements in efficiency such as LEED, the boiler overhaul, and solar panels. Through these actions, Dalhousie has made great strides in reducing consumption and waste while expressing environmental leadership. The stark truth is that this is not enough. The reports and science that have been made available all point to the same conclusions: the moral implications of climate change and the unjust nature of its impacts demands that institutions such as Dalhousie take stronger public stances on the subject. Dalhousie has publicly and internally laid the groundwork for divestment; it is now time to take a stand.

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