

**Ad hoc Committee of Senate on Fossil Fuel Divestment
Preliminary Report to Senate
December 14, 2015**

We submit this document with the recognition that it is not yet a final report. There are areas in the document where the committee still has work to do in refining its own views. Most importantly, the committee is circulating this preliminary version in order to stimulate further discussion and feedback from the university community before preparing its final report.

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1. Introduction

The Dalhousie Student's Union unanimously passed a motion in November 2013, calling on Dalhousie's Board of Governors to end investments in fossil fuels. On February 28, 2014 Divest Dal presented to the Board of Governors Investment Committee, requesting the following three items from the Board of Governors.

That the Board of Governors provide investment transparency by making a public listing of all securities held in Endowment Funds;

That the Board of Governors freeze investments in fossil fuels by making no new investments in fossil fuel industries; and

That the Board of Governors develop a plan to divest completely of all securities from the top 200 companies with the greatest potential for carbon emissions within four years.

In response to Divest Dal's proposal, the Investment Committee examined the merits of Dalhousie University divesting their holdings in publicly traded companies that are large carbon producers. In their report, the committee acknowledged that divestment may have implications on the University Community including students, alumni, funding partners, government and industry, research partners and granting agencies, and on future, present and past donors. This raised questions of the academic impact of divestment, beyond the implications that they were examining in their report.

The Investment Committee recommended that the Board not divest any of its holdings, as it was their opinion that divestment would not advance the goal of reduced carbon usage. The following three motions were approved at the November 25, 2014 Board of Governors meeting.

THAT the Board of Governors divide the question to accept the recommendations of the Board Investment Committee so that the recommendation to reject the proposal that Dalhousie divest holdings in the 200 companies identified by Divest Dal be considered separately from the recommendations for two other initiatives as set out on page 15 of the Committee's report.

THAT the Board of Governors accept the recommendation of the Board Investment Committee to reject the proposal that Dalhousie divest holdings in the 200 companies identified by Divest Dal.

THAT the Board of Governors accept the recommendations of the Board Investment Committee that the university investigate ways to allow donors to direct their endowments to non-fossil-fuel investments, that it commit to

greater openness and transparency with regard to Dalhousie's investments, and that it continue to press fund managers to respect ESG investment principles.

This ad hoc Committee on Fossil Fuel Divestment was created to examine the impact of fossil fuel divestment on academic programs at Dalhousie University (See attached Terms of Reference). Senate decided to create the ad hoc Committee on December 8, 2014 and appointed the members on June 8, 2015. The members are:

Jeremy Banks, student representative, Faculty of Architecture and Planning
Meinhard Doelle, Schulich School of Law and co-chair
Adam Donaldson, Faculty of Engineering
Tom Duck, Faculty of Science
Ruth Forsdyke, Faculty of Science
Keith Taylor, Faculty of Science and co-chair

The ad hoc Committee sent out several calls for submissions, requesting academic units to submit a maximum two-page summary of the pros and cons of divestment on their academic programs and research by October 14, 2015 (See attached Call for Submissions). Since the deadline for submissions, the ad hoc Committee has met weekly to review and evaluate the responses received from various faculties, departments, groups and individuals. This preliminary report outlines and assesses the perceived risks and benefits of divestment that were presented to the Committee, and will be circulated to the Dalhousie community for feedback and discussion prior to submission of a final report.

This document is organized as follows: We begin with a brief section providing general comments from the committee. This is followed by a section in which we summarize the content of the submissions we received. We summarize and group the main concerns identified in the responses under the headings Moral & Ethical, Educational & Enrolment, Financial & Research and Reputational Considerations. In the subsequent four sections, we revisit each of the four headings in turn and provide an analysis of the concerns identified.

2. General Comments from the Committee

The committee recognizes, and most submissions received by the committee acknowledged, the deep and profound impact that humanity's contribution of greenhouse gases to the atmosphere is having on global climate. This report includes a brief overview of the scientific understanding of the impacts in Appendix D. There is no question that serious and concerted action is needed on all scales from individual lifestyle changes to binding agreements at the international level. Universities, as thought leaders of society, need to play a major role in creating and disseminating the knowledge necessary to guide both individuals and government decision makers.

The degree of complexity of the issues that must be considered is enormous. The dynamics of the ocean-atmospheric system are such that almost all major universities have research scientists, sometimes whole departments, dedicated to understanding the contribution of anthropogenic forcing to climate change. The international economic system is similarly complex and difficult to model, with implicit coupling between these two systems at numerous points of interface. A changing climate has multiple impacts on economies and economic factors influence energy generation and usage in many ways.

It is clear that humanity must reduce greenhouse gas emissions to a fraction of current levels and we must achieve this reduction quickly. There is a growing realization that developed countries have to become carbon neutral as soon as possible, likely no later than mid-century. University researchers and industry will hold key roles in generating the knowledge needed to guide the complex interacting systems – climatic and economic – in this direction. Hopefully, they will also provide decision makers with the knowledge necessary to reduce the inevitable negative impacts economic change has on certain populations, and to take advantage of the enormous economic opportunities involved in this transition. In parallel, research is needed to mitigate and adapt to the impact of the changing climate due to our past excessive reliance on fossil fuels. Dalhousie University should provide all possible opportunities for students to learn about all aspects of this critical process.

In the Terms of Reference for this *ad hoc* committee we were charged with receiving reports (from units) and with preparing a summary document collating the opportunities and threats of proposed divestment. Section 3 of this document summarizes the content of the responses received, organized so as to highlight the distinct points made in those submissions. Section 3 meets our basic obligation to Senate.

In addition, the committee spent significant time analyzing each of the points that arose in submissions and we believe there may be value to the university community in a summary of our analysis. Therefore, Section 4 of this document

discusses the points related to each of the four categories: Moral & Ethical, Educational & Enrolment, Financial & Research, and Reputational. The Moral & Ethical considerations were a focus of many of the responses received, and a significant topic of discussion by this committee. While specific concerns and analysis can be found in Section 4, this committee notes the following key points which have formed the basis of our analysis. We believe that Dalhousie has an ethical obligation to take a leadership role in affecting climate change, which includes evaluating the corporate practices of the companies it chooses to invest in to determine if they coincide with the Dalhousie's own ethical principles. By choosing to invest in companies who fail to take constructive roles in addressing climate change, Dalhousie has missed opportunities to exercise its ethical obligations and to meet commitments it has made through numerous declarations. Divestment, however, carries with it political connotations beyond the control of the university. In response to this concern, a range of respondents with diverse views on divestment have suggested a nuanced approach to ethical investment, one which supports positive climate change action and improves the transparency of investment practices within Dalhousie University.

There are credible arguments that suggest there would be both positive and negative impacts on our educational programs should divestment decisions of some form be made. The considerable number of sustainability oriented programs we offer would be able to point to our divestment strategy both during recruiting for students and in the classroom; potentially lending credibility to the programs and attracting more students. On the other hand, there are programs where enhanced learning experiences are supported by funds from the oil and gas industry. The publicity expected around a divestment decision has the potential to positively or negatively affect investment from industry. We would expect the impact on Education & Enrolment to be felt in both directions and to be relatively modest overall, but are not in a position to quantify these impacts or assess their distribution over the range of programs offered at Dalhousie.

In the Financial & Research category, the implications of divestment revolve around two issues; predicting stock prices and access to research funding. In the long term, it is very likely that companies whose value depends largely on fossil fuels will find that their value degrades as the world transitions towards sustainable energy sources. Concerning access to research funds from oil and gas companies, we believe that two distinct areas must be considered. For collaborations developed by individual researchers, companies are likely to make their decisions on funding based on the quality of research proposals and developed relations, limiting the impact of a divestment decision. For initiatives which are driven at an institutional level (endowed faculty positions, multi-institutional strategic grants, capital fundraising), divestment may impact future opportunities. In the interests of quantifying potential risk, historical financial data from the past five years indicates that the fossil fuel sector contributes on average 1 million dollars per year to research activities at Dalhousie, under 1% of Dalhousie's total annual research and contract funding.

In light of suggested actions received by the Dalhousie Community, this committee proposes the following approach which is broadly consistent with the diversity of viewpoints expressed in submissions.

Proposed framework for the development of ethical guidelines for investment

This committee is recommending the adoption of ethical guidelines for investment which would enable a systematic process by which individual investments of concern could be assessed in an open and transparent structure. The guidelines and criteria proposed below are presented as initial points of discussion within this process in an attempt to capture the concerns raised by the Dalhousie community over climate change, divestment, and meeting ethical obligations while respecting Dalhousie's inherent diversity and the desire to encourage positive engagement with this industry. The Committee recognizes that the preferred approach to investment of many institutions is through mutual funds where day to day decisions on stock trades are not under the control of the investing institution. In this regard, we note that divestment and the ethical investment movements have resulted in a growth of mutual funds with guidelines that should be consistent with an ethical investment policy.

A method for implementing this process the committee is putting forward for consideration is a reverse onus approach, whereby Dalhousie would notify companies for which ethical concerns have been raised of the intent to withdraw investment within a specified time period unless the company demonstrates to the satisfaction of the University that its business practices and history align with Dalhousie's ethical investment guidelines on climate change and environmental stewardship. As a starting point within this process, this committee recommends that the university initially review their investments in companies identified by other credible organizations as problematic, such as the 200 companies listed on the Carbon Majors list within the ethical guidelines developed.

Given the concerns raised through this process, the following criteria for ethical review of investment in a given company are proposed:

- Lobbying of the public, government departments or government decision makers, either directly or indirectly, against effective climate policy, environmental stewardship or other measures connected to the transition to fossil-free energy sources.
- Opposition to global cooperation on climate mitigation, adaptation and impact evaluation, or the transition to fossil-free energy sources.

- Support of or membership in organizations actively promoting climate change denial or actively attempting to confuse the public about the overwhelming scientific consensus about the human contribution to climate change.
- Financial valuations based on significant asset holdings in the form of rights to fossil fuel reserves which, based on current technology, would need to remain undeveloped to avoid the worst impacts of climate change.

This committee recognizes that the intent of ethical investment practices is to facilitate positive action and the adoption of corporate ethics which support effective mitigation of climate change and improved environmental stewardship. The development of a framework for engagement with companies would be beneficial to this process, providing examples of actions and activities that the Dalhousie Community considers relevant in demonstrating active engagement in constructive partnerships to address climate change and sustainability.

3. Summary of Submissions

The following summaries are derived from the responses received from the Dalhousie Community, and have been presented in an attempt to express the common elements and viewpoints encompassed in these submissions. A list of suggested solutions can be found at the end of the section. Details regarding the referenced submissions and level of stated support can be found in Appendix C. Through analysis of these responses, this committee has proposed key viewpoints, which are discussed in detail in Section 4.

Moral & Ethical Considerations

Viewpoints supportive of divestment

Alan Pinder (1) describes divestment as a “right-minded courageous step”. IDS (3) finds Board’s reasons for not divesting “neither unreasonable nor incorrect” but argues these reasons have been “outweighed by moral, ethical and financial arguments in favour of divestment”. Env. Sci.’s (4) primary objection to not divesting is “moral and environmental”; they state that “Dalhousie must not be seen to profit from industries that undermine the resilience of our planet” and describe climate change as an “existential threat to human existence”. Law (6) states that “fossil fuel use - and thus fossil fuel divestment” are “matters of justice” due to “uneven distributional effects” of climate change, which confirm “the need for Canada to become carbon neutral as soon as possible based on indisputable science and ethical positions that are really beyond challenge” and that “Divestment’s possible effects on Dalhousie’s academic programs and research should not be the sole determinant of whether the University chooses to take that step”. Social Work (8) sees divestment as “reinforcing Dalhousie’s own commitment to “principled and ethical actions”, the FSPA (9) sees it as being consistent with “moral convictions of faculty, students, and staff”, while Economics (10) sees divestment as being “required primarily on ethical grounds”, warning against a “short sighted calculus” which would take into account potential yet uncertain costs to the university such as the response of potential donors and “complex operational decisions related to a divestment”. DSUSO/DSU (11) states that although they “know... that there are fears of financial instability” and a potential but uncertain “reduction in student enrolment and funding cuts to specific programs” that it is their moral responsibility to support divestment.” Some Phys. & Atm. Sci. faculty support divestment as a “concrete action supporting the essence of responsible environmental policies”, while the Coll. of Sust. (19) reached no consensus on the divestment issue but states that “Investment in companies with holdings of carbon reserves are a form of complicity in the management of those carbon reserves.” Lastly, an alumnus (22) drew attention to the Investment Committee’s concern about divestment frustrating the “goal of reasonable (risk adjusted) returns but describes not divesting as “approaching moral bankruptcy”.

IDS (3) notes that they work with communities around the world, which are “directly and adversely affected by climate change” and that Dalhousie, hence, has a “very strong responsibility to act in every way feasible to reduce Dalhousie’s impacts on climate change and to contribute to the search for genuinely sustainable strategies for global human development”. Env. Sci. (4) states that Dalhousie “should not invest in companies whose financial worth is predicated on a business model that has irremediably catastrophic effects for the planet”. Law (6) notes if Canada fails to become “carbon neutral as soon as possible” that this “either puts an unfair burden on future generations or asks other countries to carry an unfair share of the burden of addressing the problem.” Social Work (8) is “committed to

“Universal entitlement and access to the services and opportunities to meet basic human needs in the areas of housing, health care, child care, education and old age security”. FSPA(9) states that: “The scientific consensus is clear that fossil fuel extraction at the current pace will result in catastrophic climate changes that threaten... vulnerable people around the globe.” Economics (10) states that climate change costs from fossil fuels are “undermining the very society” they “helped to create” and “these costs will weigh most heavily on the poorest among us and on future generations including our students” and, that fossil fuels have “generated heavily contested resource rents..., which have led to wars and violations of human rights.” DSUSO/DSU (11) state that their own divestment was motivated by the fact that they “value a sustainable future”, a matter of intergenerational justice. Similarly, the Phys. & Atm. Sci. submission (14) states that: “It is imperative that we invest in our students futures, not in companies that resist changing their practices, which are helping to destroy that future”. An alumnus (22) stated that by failing to divest, “Dalhousie is complicit in the great suffering and death that could result from catastrophic climate change”; they argued that “its not a question of if you divest, but when you divest”.

IDS provides arguments and references literature to support its statement that: “Divestment is increasingly being embraced as a viable strategy for effecting meaningful change in the fight against climate change.” Env. Sci. (4) writes that “a public divestment policy from a world-class Canadian university sends a bold public statement with political significance to these companies, as well as to our students, staff, faculty, alumni and greater university community that the university is “walking the talk”. Law (6) describes divestment as a “powerful symbol” while Social Work (8) sees divestment as setting a “positive example”. FSPA (9) states that “today institutions ... including University of Glasgow and Syracuse University, are divesting. They have rightly garnered widespread positive publicity for their leadership on this issue, and Dalhousie should join them in this bold, principled stand.” Economics (10) states that: “divestment would send a principled signal... ” and that this “will help to create a focal point around which environmental and human rights concerns can be expressed and policies developed.” DSUSO/ DSU (11) sees divestment as fulfilling their “mandate to be recognized as a leading advocate, and provider of innovation and valued services for students at Dalhousie University” and that this has enabled the “DSU to become a leader in the ability to shift societal norms and institutionalize climate justice and equity through responsible investments.” The Phys. & Atm. Sci. submission (14) sees divestment as sending “a clear symbolic message that things have to change”.

IDS (3) notes that the Economist (2014, 11, 02) finds suggestive but not conclusive evidence that the South African and Israeli divestment movements raise companies’ borrowing costs. They note, however, “that the motive behind such campaigns is much broader than simply financial: the goal of divestment is to deprive energy companies the political, social and cultural capital to influence debates over climate change... the goal is to galvanize opposition to these companies and put pressure on them to leave the bulk of their carbon holdings in the ground.” Similarly, the FSPA

(9) states that “History has proven divestment to be an effective strategy for achieving major and necessary reforms as when Dalhousie joined a wave of institutions that divested from companies supporting apartheid in South Africa in the 1980s. Today institutions ... including University of Glasgow and Syracuse University, are divesting. They have rightly garnered widespread positive publicity for their leadership on this issue, and Dalhousie should join them in this bold, principled stand.”

As a counterargument against arguments that divestment will slow research and development of renewable energies because fossil fuel companies invest in these, Env. Sci.(4) states that “fossil fuel corporations have a limited history with renewables and the overwhelming majority are entirely dedicated to fossil fuels”. They note that “Beyond Petroleum” had recently changed its name back to “British Petroleum” and that Total S.A.’s photovoltaics, if installed would produce less than 0.5% of their total energy production and that Total S.A. has recently invested \$12 billion in Oil Sands. They argue that fossil fuel companies have little incentives to switch because profits from fossil fuel extraction are so high. IDS (3) disagrees with the Dalhousie Investment Committee, which they report as saying that “divestment will have little or no impact on the global problem of climate change as our holdings would simply be bought by another investor”. They state that they “commonly encounter similar sentiments among their students: how can the actions of one person (or one university!) possibly impact such widespread and entrenched problems? Our answer: Yes, the impact of one individual, or one organization, is minimal. But together these individual actions combine to truly powerful scales and have succeeded in overcoming the world’s most intractable problems and conflicts... The Investment Board’s message here undermines much of the current IDS curriculum, which is explicitly structured to impart the knowledge skills and attitudes needed to embark upon a life as an active and engaged global citizen”. Env. Sci. (4) argues that Dalhousie has signed a variety of international agreements, which “commit Dalhousie to becoming a leader in creating a sustainable future.” Law (6) refers to its Mission and Vision Statement, which states that its mission “serves society – locally, nationally and internationally” and part of its vision “is a ... sustainable community”. Its values include “integrity, respect, courage, social justice, and unselfish public service.”¹ Social Work (8) notes that divestment reinforces Dalhousie’s Mission Statement, which commits Dalhousie to “principled and ethical actions” and “is consistent with the Canadian Association of Social Workers Code of Ethics”. FSPA (9) states that “investing in fossil fuel development profoundly contradicts the intellectual, artistic and moral convictions of faculty, students and staff of the FSPA”. Economics (10) finds divestment to be consistent with “University teaching priorities in oceans, agriculture and survival of coastal communities, many of them poor”. DSUSO/ DSU (11) states that divestment is consistent with its commitments of “avoiding investments in businesses whose activities are inconsistent with the Student Unions’s missions and values”. An alumnus (22) stated that early divestment would enable Dalhousie to achieve “goals

¹ <http://www.dal.ca/faculty/law/about/history-of-schulich-school-of-law/mission---vision.html>

of strategic direction” and improve its reputation in “academic excellence” both nationally and internationally.

Summary points:

- (i) It is unethical for the University to continue to invest in fossil fuel companies.
- (ii) There will be costs of divesting, but they are warranted on ethical grounds.
- (iii) Divestment is a matter of justice, protecting the most vulnerable, many of which have no control over what happens in developed countries where most of the emissions take place.
- (iv) Dalhousie and other universities need to show moral and ethical leadership in societies.
- (v) Divesting is an important symbolic gesture to support the transition to a fossil fuel free world that could lead to a meaningful impact.
- (vi) The attitude against divestment is the same attitude that has prevented the world from solving the problem, not taking responsibility for ones contribution to the problem and waiting for others to act first.
- (vii) Divesting campaigns in South Africa against apartheid are comparable and were successful, the impacts are not primarily financial, and they are political and ethical in nature.
- (viii) Divesting is supportive of some existing professional codes of ethics governing practice by Dalhousie employees and sustainability agreements to which Dalhousie is a signatory.

Viewpoints against divestment

Earth Sci. (21), Engineering (13) and Ian Hill, Acting Dean of F.o.S. (5) all express ethical concern over climate change, but do not support divestment. Earth Sci (21) states that “Our department is united in concern for the significant anthropogenic disruption of the global carbon cycle, and resultant effects in climate and the oceans.” Engineering (13) states that they are “keenly aware of the serious challenges presented by climate change and of the dire consequences that will result from not addressing the issue decisively. We believe that Canada needs to do all it can to wean itself off fossil fuels and to develop more sustainable energy sources.” Ian Hill (15) states that he has devoted his professional life to the development of new solar cell technologies. “Every day I work towards a future where society is free of the damages caused by the burning of fossil fuels.” Nevertheless, he does not support divestment because “it will have minimum positive effect, large negative effects, and does not address the core problems of fossil fuels: lack of government regulation, large government subsidies, insufficient or lack of pricing on carbon emissions, and the continued over-consumption by virtually every individual in Canada (and elsewhere).” Engineering (13) argues divestment would be harmful due to “symbolically isolating energy companies” who are “repositories of knowledge and expertise” and are “already investing in alternative energy sources, and its impossible to see a workable answer that doesn’t involve them” because government lacks the depth and global reach. Earth Science (21) notes that “divestment is insensitive to the variations between publicly traded firms within the fossil fuel industry. For example, some firms have moved relatively quickly toward alternative renewable sources while others provide financial support for denial groups and their propaganda. As a university Dalhousie should take a nuanced and informed view rather than apply broad-brushed generalizations.” Instead, they suggest “developing and implementing an aggressive sustainable investment strategy which is applied across sectors ...”

Engineering states that “it can be argued that a move towards divestiture may on occasion have the force of an ethical imperative, such as was the case for universities in the 1980s that had South African holdings, we do not believe that any such claim can be made in this instance. The apartheid regime was morally repugnant root and branch for its inception. To place the energy companies into the same category simply puts them outside the circle in a way that allows us to forget that the responsibility for climate change extends far beyond them: they are part of a web that includes our own personal choices and the choices that government makes on our behalf.” Ian Hill, Acting Dean F.o.S. (5) states that “divestment of university holdings in fossil fuel companies will not, in itself, hurt these large companies but will stand as a statement of values that will hopefully influence others.” Engineering (13) argues that divestment will harm fossil fuel company’s “investments in research into alternative energy sources”, also noting that “even if our aim were to drive down the price of shares or bonds issued by these corporations, Dalhousie’s holdings are not large enough to achieve even this modest goal” and would have “no direct effect on the funding of new oil and gas projects or

on company operations in general.” Both Earth Sci. (21) and Engineering (13) suggest that other approaches could have a more meaningful impact than divestment.

An M.Sc. Earth Sciences Student (18) draws attention to the use of fossil fuels for food and clothing production, heat and shelter, health and easy travel while M.Sc. Earth Sciences Student Charles Carlisle (20) states that fossil fuels enable us to “live in the luxury we do through air-conditioned summers and heated winters” adding that “while the future holds alternatives, it is still quite far away.” Ian Hill (15) argues that the divestment movement is “hypocritical” while we all, individually continue to burn fossil fuels as a matter of necessity.” In particular, he notes that we have not yet solved the problem of intermittency of renewable energy, which requires us to develop means to store this energy.

Summary points:

(ix) Divestment treats a large number of companies the same, regardless of their degree of transparency and on-going activities towards addressing climate change and alternative energy solutions.

(x) A moral requirement to address climate change does not equate to a moral justification for divestment.

(xi) Divestment is not comparable to apartheid. To place the fossil fuel companies into the same category as apartheid is an attempt to attribute responsibility for climate change to a few organizations when it is a far broader issue.

(xii) Divesting is hypocritical as it singles out those who extract fossil fuels while we all still rely on them and will continue to for some time.

(xiii) Divesting will not (or only minimally) contribute to addressing climate change.

Educational & Enrolment Considerations

Viewpoints supportive of divestment

Env. Sci. (4) states that their students and those in other degree programs “are highly likely to see the hypocrisy and inconsistency of Dalhousie University teaching and engaging in research on climate change on the one hand and then literally sponsoring industry that significantly contributes to climate change with the other.” Law (6) notes that “Being part of a larger institution that, through its investment strategy, seeks to profit from fossil fuel exploitation belies this claim and open us all up to the charge of hypocrisy.” Social Work (8) sees divestment as “an opportunity for Dalhousie to position itself as a global leader in environmental accountability and sustainability.” FSPA (9) thinks that divestment would “vastly increase” Dalhousie’s appeal to students in humanities and social science who are interested in social justice and environmental issues. Economics (10) states that by not divesting, Dalhousie provides “tacit approval for the ongoing plundering of our environment”. The Phys. & Atm. Sci. submission (14) argued that not divesting could make the creation of the College of Sustainability a “ruse”. An alumnus (22) suggests that it is hypocritical for Dalhousie to increase a \$600,000 contract with Shell Canada while stating that it has recently invested \$45 million in sustainability projects on campus which are “demonstrating that Dalhousie is taking a leadership role as environmental steward in day to day operations.”

Law (6) states that divestment would attract “both students and new faculty who might not otherwise place a priority on coming to Dalhousie” especially in the Environmental Law Institute and Health Law Institute. FSPA (9) states that divestment would “increase the appeal” of social science and humanities programs because these students “tend to be particularly interested in social justice and environmental issues.” IDS, Env. Sci., Law, Social Work, FSPA, Economics (3,4,6,8, 9,10) see either no or positive impacts. Economics specifically uses the word “direct” to qualify impacts.

Summary points:

- (i) Divesting might enhance the credibility of sustainability oriented programs throughout the university.
- (ii) Divesting may increase enrolment in sustainability oriented programs.
- (iii) Divesting may be attractive to some candidates for faculty positions.
- (iv) Many departments see either no or positive direct impacts.

Viewpoints against divestment

Dean of F.o.S., Chris Moore (5) is concerned that divestment would limit freedom of inquiry, which he notes is a Senate value stated in the proposed preamble to the Senate constitution as follows: “freedom of inquiry – openness to free inquiry, the free expression of ideas, and open discussion in all matters internal and external to the University and in all contexts internal and external to the University must be respected.” Similarly, Acting Dean of F.o.S., Ian Hill (15) states that divestment will “indirectly and perhaps intentionally stifle academic freedom”.

Proponents against divestment (13, 15, 5, 21) all state that their programs are significantly involved in sustainability with Engineering noting that it has “one of the few environmental engineering programs in Canada”. All were concerned that a decrease in fossil fuel funding could harm research and teaching. This might indirectly reduce the credibility of their sustainability programs. Ian Hill, Acting Dean F.o.S. (15) states that: “Diversity of research and views are hallmarks of a university. I would argue that an effective university must house internal contradictions.” An MSc. Student in Earth Sci. (18) states that they “have been proud to say I come from a school where diverse and contrasting views are presented, where the students are taught all the evidence available and then encouraged to research further.”

Arguments that divestment “may adversely affect academic programs, which work in partnership with the fossil fuel industry, reducing support for academic enhancement programs” is provided under “Financial and Research Considerations”.

Summary points:

- (v) Divesting may limit academic freedom (freedom of inquiry) by restricting funding opportunities for researchers studying geological structures or processes of interest to fossil fuel extraction industries.
- (vi) Diversity of research and educational views, even those in apparent contradiction, is a hallmark of a university.
- (vii) Students and faculty working in academic units who work with the fossil fuel industry may feel alienated.
- (viii) Divesting may adversely affect academic programs that work in partnership with the fossil fuel industry, reducing support for education enhancement programs.

Financial & Research Considerations

Viewpoints supportive of divestment

Alan Pinder (1) states he thinks divestment would have “minimal adverse effects for university finances”. IDS (3) states that “recent empirical studies challenge the validity” of the contention that divestment would undermine Dalhousie’s fiduciary duty with regards to management of its endowment. They note that the former Chairman of Shell on July 4th, 2015 stated that “divestment remains a perfectly rational (and profitable) move for investors” and refer to a recent analysis in *The Economist* ², which presents compelling evidence that divestment makes good economic sense.” Evidence includes: a study by MSCI, an index firm undertaken between 2007 and 2015, which statistically found that “investment portfolios with less exposure to fossil fuel companies outperformed the market as a whole”; and, a statement by Mercer, an actuarial consultancy, which recently cautioned that “investors cannot assume that economic growth will continue to be heavily reliant on an energy sector powered predominantly by fossil fuels” and “predicts that annual returns from coal could fall by anywhere between 18% and 74% over the next 35 years”. IDS states that a recent report in the *Globe and Mail* corroborates by showing that the “FTSE Developed index excluding fossil fuels outperformed the main developed index in four of the past five years.”³ The Phys. and Atm. Sci. submission (14) questions “whether Dalhousie University can reasonably expect to make money investing in fossil fuels” and state that Jeff Rubin, author of “The Carbon Bubble: What happens to us when It Bursts” and chief economic advisor of CIBC for 20 years “clearly rebuts this statement.” Similarly, FSPA (9) states that leading analysts have argued that fossil fuel markets are heading for increased volatility and that current investments in fossil fuel industries are vastly overvalued, a situation economists have called a “carbon bubble”.⁴ They also refer to list of over 250 major institutions, which have committed to divesting fossil fuels.⁵ Economics (10) states that “Divestment may prove to be consistent with good long term management of the endowment.” and that “Companies that exhibit responsible environmental behaviour, social behaviour, and internal governance may be manifesting characteristics that identify good investment opportunities”.

From a research perspective, Phys. and Atm. Sci. (14) argues that “the university jeopardizes attracting other partnerships with strong commitments to clean energy”. Law (6) thinks that divestment could increase research funding. For example, the Rockefeller Foundation, which has divested, might be more likely to “favour extending grants to other institutions that have themselves divested”. They

² *The Economist* (Feb. 11th, 2015) Divestment Campaigns Fight the Power.

³ Tavia, Grant (2015, June 15) The growing movement away from fossil-fuel investment”, *Globe and Mail- Report on Business*, pg. B1, B4.

⁴ Leaton, J. Unburnable Carbon-Are the World’s Financial Markets Carrying a Carbon Bubble? Carbon Tracker Initiative.

⁵ Divestment Commitments Overview <http://gofossilfree.org/commitments/>

also state that “it seems likely that in the next few years many Canadian universities will take this step.” and that the benefits of divestment would be higher if Dalhousie is an early mover, but would be lower, the longer Dalhousie waits to divest, and could become negative if Dalhousie is a laggard.

Env. Sci. (4) in responding to the anti-divestment argument that “we need to put pressure on the fossil fuel industry, but through traditional means like shareholder resolutions”, states that “shareholder resolutions have attempted to change behaviour in the fossil fuel industry but have yielded few results.” and that “the majority of shareholders in the fossil fuel industries will not vote to keep 80%...of reserves in the ground.” With regards to the 80% number, IDS (3) provides details from a 2015 synthesis article published in *Nature*⁶, which “argues that ‘keeping it in the ground’ is the only viable strategy for keeping global temperature increases below 2°C, recommending that one-third of oil reserves, one-half of gas reserves, and 80% of coal reserves must stay in the ground in order to meet this target”.

Env. Sci. (4) states that divestment does not prevent individuals within the university pursuing their own research interests and contracts (i.e. a scholar could still engage in research with a fossil fuel company). “Divestment does not impinge on academic freedom. Rather, it is a clear statement that the university will not support investments that contribute to the declining health of the planet, and therefore humanity.” FSPA (9), agrees that divestment may put at risk private sector contributions to “research funding and academic endeavor” but argues that “to safeguard principles of academic freedom, decisions about universities investment and endowment should remain entirely separate from our procurement of outside research funding”, which should be based on “merits of the research, not on the extent to which the university supports the interest of outside donors.”

Summary points:

- (i) It is financially risky to continue to invest in companies that hold significant stranded assets in the form of fossil fuels that cannot be used.
- (ii) Divesting will open up new opportunities for funding from sources that support the transition away from fossil fuels.
- (iii) Decisions about the University’s investment and endowment should remain independent from our procurement of outside research and academic funding.

⁶ McGlade, Christophe & Paul Ekins (2015) “The geographical distribution of fossil fuels unused when limiting global warming to 2°C, *Nature*, 517.7533, 187 – 90.

Viewpoints against divestment

Earth Sci. (21, 17, 18, 20), Engineering (13), Chris Moore, Dean F.o.S. (5), and Ian Hill, Acting Dean F.o.S. all note that divestment could adversely affect funding from the oil and gas industry for academic programs. Moore (5) emphasizes that some “research contracts generate substantial overhead that can then be used to support other research programs by providing enhanced infrastructure support.” Ian Hill (15) argues that divestment will have “... no financial impact on the fossil fuel companies” but would be “a clear and very public statement that Dalhousie has taken a moral stand against the fossil fuel companies. This will obviously lead these companies to withdrawing their support from our educational and research programs.” Engineering (13) states there are “significant financial risks” to their Faculty, which receives financial support from fossil fuel companies like Shell. They did not however think such companies would respond to divestment by ending their relationship with Dalhousie” but thought there might be a “chilling effect across the board”.

Moore (5) notes some potentially affected academic programs. These include *Math Circles*, an outreach program of Dept. of Math & Statistics with the mission of “enhancing mathematics literacy in the K-12 system” (5). Imperial Oil provided \$100,000/y of funding between 2009 and 2013. Also, the *Shell Campus Ambassador Program* (Shell CAP) and other funding from the oil and gas industry provides “a variety of enriched student experiences” including introductory and advanced field schools in Earth Sci. supported by Shell Experiential Learning Fund (SELF). Moore notes that these “expose *all* Earth Science students to general field methods”, not just petroleum-focused students. These include a 2-week-long field trip to study the petroleum industry in Calgary and a week-long field trip to Trinidad to study “exposed petroleum reserves”. Funding also enables students to compete in the Imperial Barrel Award competition, in which Moore notes that Dalhousie students “have an enviable record of success”. Professor Grant Wach, Earth Sci. (17) notes they won the world competition in Madrid in June. Earth Sci. (21) notes that SELF in their department totaled \$294,000 (2015-2018) and that 17% of this is committed to the Offshore Energy Fund, which supports a “wide variety of teaching and research activities” and that the industry partner has explicitly requested “that the funds be used to support experiential learning in all fields of Earth Science, not targeted towards petroleum geoscience” and that University financial support is insufficient to “provide the labs, field schools, and equipment needed for a modern Earth Science degree.” Wach states that “there are fantastic salaried internship opportunities for our students often in Calgary, for course credit”. He notes that: “Most importantly, we also educate our students to understand and respect the environment and they take this knowledge with them upon graduation.” Engineering (13) notes that SELF has brought over \$1 mill to Engineering, Earth Sci. and Management over the past 10 years, which has been renewed for another three years at a level over \$500,000. In engineering, most of this money goes towards “enhancing student experience by helping us to (a) upgrade labs, (b) purchase equipment, (c) refurbish common space for students, and (d) send students to

conferences. They note that Shell “hires Dalhousie students for co-op jobs and internships and many of our graduates have found employment with Shell.”

Moore, (5) states that “divestment would work both ways” in terms of positive and negative impacts and is uncertain but could impact Earth Sci. and Oceanography and F.o.S. negatively if oil industry research funding falls. Moore states that: “A senior executive at Shell (who fund the Campus Ambassador Program (CAP) that continues to benefit the Faculty) told me directly that the company is monitoring the university divestment movement closely and would look unfavourably on any university that divested in regard to future investment. Certainly, Dalhousie’s divestment would send a clear signal that the university is not supportive of the oil and gas industry and could well lead to withdrawal or nonrenewal of investment by oil and gas companies in Dalhousie activities.” Some of this research, “(particularly marine research requiring shipping time) is extremely expensive to carry out and would be almost impossible given the typical levels of funding available through government agencies.” He draws attention to Exxon Mobil funding of Earth Science and Oceanography research at 3.26 mill. (from 2010 – 2013) and \$23 mill. (from 2012 – 2020).

He also notes that: “The federal government, thorough granting agencies...has moved steadily towards an industry engagement and partnership model” such as the NSERC Industrial Research Chair Program, which allows hiring of new faculty members through a combination of granting council and industry money. Oil and gas companies are potential partners for such chairs; indeed we have been in negotiation with Encana over such a chair.” David Anderson, Dean of Medicine (12) expresses concern that divestment might affect the Irving endowment of 2.0 mill, which supports the Research Chair in Occupational Medicine. Atm. Sci. & Phys. (7) note there would be no or negative impact on one department member’s research on fog data collection from Hibernia Management and Dev. Corp. oil rigs. Earth Sci. (21) is concerned that divestment will compromise their CFRER research initiative on “*Resources, risks and sustainable development of the ocean frontier: science, technology, policy and education leadership*”. They are asking the Federal Government for \$70 mill. and “are intent on raising a similar matching amount in the form of gifts from private donors and companies, including those in the natural resource business”. This research would include an “innovative study of rifted margins, with the goal of making fundamental science contributions to our understanding of planet earth...” and will have “practical applications for offshore natural resource exploration and risk assessment and mitigation”. They also state that Shell, BP and their partners have committed to invest nearly \$2 bill. in hydrocarbon exploration of Nova Scotia’s continental margin and that Dalhousie would have an “important role to play in ongoing exploration and eventual extraction and transportation” and that “Divestment will reduce Dalhousie’s capacity to perform this work, by reducing out ability to teach and do research”. They also argue that this research can aid Nova Scotia’s energy security.

Wach (17) cites funding on Marion McCain Arts building funding donor boards as listing the following energy related companies as contributors to Dalhousie. These are: Exxon Mobil Oil Canada Ltd. (+ 1 million), Imperial Oil Ltd. (\$250,000 – \$499,000), Emera (\$250,000 – \$499,000), Petro Canada (\$250,000-\$499,000), Shell Canada (\$250,000 – \$499,000), Trans Canada Pipelines (\$100,000 – \$249,000), Schumberger (\$24,000 – \$90,000). He notes that: “To date our research has generated, or directly contributed to significant funding, software and access to data that allow our team of students and associates from around the world to conduct our research.”

From a fundamental investment perspective, Engineering (13) noted that “Dalhousie would simply be one investor selling these securities to other investors (and at depressed prices)...” Ian Hill, Acting Dean F.o.S. (15) notes that: “The divestment movement seeks to circumvent the managers and dictate the sale of fossil fuel holdings. I certainly wouldn’t want my investment portfolio to be directed in this way.” An Earth Sci. M.Sc. Student (20) worries about “hefty fines leveraged by financiers for early withdrawal”.

Summary points:

- (iv) Divesting will reduce funding from the fossil fuel industry for academic programs.
- (v) Divesting will reduce industry research funding including the funding of industrial research chairs.
- (vi) Divestment could lead to the return of endowments (e.g. funded chairs) from funding sources with fossil fuel links.
- (vii) Divesting will reduce donations to Dalhousie.

Reputational Considerations

Viewpoints supportive of divestment

Law (6) thinks divestment will increase student enrolment and new faculty and research funding might improve from major foundations such as the Rockefeller Foundation who have themselves divested and “seem likely to favour extending grants to other institutions that have themselves divested.” DSUSO/DSU (11)’s statement that “over 1800 Dalhousie students have shown support for this growing movement as a way to take a stand on climate change” is suggestive of the potential for increases in enrolment. An alumnus (22) states that they think the effect of a full divestment on Dalhousie’s national and international reputation will be ground breaking.

FSPA (9) believes that “divesting from fossil fuels is perhaps the single most effective way for Dalhousie to project a positive image as an institution committed to progressive values and ethical engagement with the regional and global communities it serves”.

The Physics and Atm. Sci. submission (14) states that: “There is a real risk that funding from major players in the fossil fuel business may withdraw their institutional support, but we argue that the university jeopardizes attracting other partnerships with strong commitments to clean energy.”

An alumni’s (22) submission suggests that sustainability alumni might increase donations.

Summary points:

- (i) Being an early adopter of divestment will present advantages for Dalhousie in terms of marketing and reputation (for enrolment and funding).
- (ii) Divestment will increase Dalhousie’s reputation as an organization focused on sustainability and the environment.

Viewpoints against divestment

An Earth Sci. M.Sc. Student (18) states that faculty, alumni, and current and future students in Earth Science will “feel stigmatized and discriminated against for choosing to pursue their careers. We see and are working on the energy challenges facing the population as much as anyone else, so why are we being ostracized and our work disregarded?” Similarly, Earth Sci. Professor Grant Wach (17) states that he feels “stigmatized” and “under continuing pressure to defend his research”. He states that “We must reflect on the message divestment will send across Canada, a message that potential students, alumnus and energy companies will hear when they come to recruit, support of our programs and philanthropic requests”.

Engineering (13) argues that “symbolic isolation” of fossil fuel companies would be a mistake because they are “repositories of knowledge and expertise that will almost certainly have to be a solution to the problem”. Similarly, an Earth Sci. M.Sc. Student (20) stated that: “Much of the technology and data employed in the study of the earth has been developed by the fossil fuel industry with the goal of greater understanding of its processes. It must be noted these techniques and datasets are not exclusive to the search for more hydrocarbons, but also include environmental regulation, risk mitigation and flow modeling for renewable energy sources”. An Earth Sci. M.Sc. student (18) also argued for engagement with fossil fuels and that Dalhousie can become a more active shareholder through attendance at annual investor meetings.

Summary points:

- (iii) Divesting will alienate some alumni from programs that have strong links to the fossil fuel industry, specifically in earth sciences and engineering.
- (iv) Divesting will affect Dalhousie’s reputation and existing relations with industry sectors, isolating fossil fuel companies when they have to be part of the solution. As such, divesting will be counter-productive.

Summary of Submission Suggestions

A summary of suggestions is provided below:

- *“declare [a] moratorium on future investing in fossil fuel companies and develop a fiscally responsible divestment plan for current investments over the next 5 years”.* (Env. Sci., 4)
- *“decisions about universities investments and endowment should remain entirely separate from our procurement of outside research funding”* (FSPA, 9)
- *“take several years to implement a strategy of divestment” which will involve “complex operational decisions”* (Economics, 10)
- *Dalhousie commit to invest a “defined portion of its portfolio in ways that support the development of new environmentally responsible energy technologies - this could be coupled by a “commitment by Dalhousie to provide additional support for research into the scientific, technological, and policy dimensions of these new technologies...”* (Engineering, 13)
- *at minimum, divest from “coal producers and those oil companies, which focus on exploiting tar sands as have several leading academic institutions, such as Oxford University, The University of California, Stanford University and others...” have done* (Phys. & Atm. Sci., 14)
- *“faculty, students, and staff participate... to achieve the goal of a carbon-neutral campus by 2020. This would require 1) commitment that all future infrastructure be carbon neutral, 2) establish a policy that academic units develop a plan to achieve this goal”* (Grant Wach, Earth Sci. Prof., 17)
- *maintain relationships with fossil fuel companies in order to increase Dalhousie’s “opportunities to complete collaborative research on current energy challenges” and “become a more active shareholder by attending annual investor meetings, asking questions to executives and board members if there is concern about the direction being taken, and by making shareholder proposals.”* (Earth Sci. M.Sc. Student, 18)
- *“meaningful university-wide engagement in the development of a broadly-held morally grounded policy on fossil fuel divestment of university endowments” with the President’s Advisory Council on Sustainability as a venue for initiating this engagement. The College recommends that the “scope of this policy extend to include a broad social and ethical review of all university investments, including pension funds”* (College of Sustainability, 19)
- *spend money that would have been spent on possible early withdrawal fines due to early divestment on infrastructure* (Earth Sci. M.Sc. Student, 20)
- *develop and implement an “aggressive sustainable investment strategy, which is applied across sectors” and not just fossil fuels and “renewed efforts to lower Dalhousie’s CO₂ footprints- including efforts spanning personal travel decisions to operations management”.*
- *look further ahead when making decisions* (Alumnus, 22)

4. Analysis by Committee

Moral & Ethical Considerations

Prior to discussing the moral and ethical positions in the responses received, we want to note that there was consensus amongst the majority of respondents on the serious and urgent need to address climate change, irrespective of their views on divestment. This suggests that the broader Dalhousie community accepts anthropogenic climate change as fact. The at times conflicting moral and ethical viewpoints expressed related specifically to divestment as a useful action in the fight against climate change.

Viewpoints supportive of divestment

It is unethical for the University to continue to invest in fossil fuel companies.

The assessment of the moral or ethical implications of Dalhousie (and other institutions) continuing to invest in fossil fuels is a focal point of the divestment initiative. Some consider it immoral to invest in and profit from fossil fuel extraction and combustion due to its status as the largest contributor to greenhouse gas (GHG) emissions and historical practices by some companies within this industry to sponsor efforts to delay climate change action and undermine environmental stewardship. Others have argued that the global impact of developing carbon holdings ultimately results from consumption and associated GHG emissions, where extension and adoption of the ethical premise for divestment to industries with similar GHG emissions⁷ would introduce complex factors into the assessment of utility and benefit of this approach to addressing climate change. These are some of the many factors which have resulted in such diversity and polarity of views on divestment both at Dalhousie and in other institutions.

The committee feels that it is important to keep in mind that there is no ethical imperative to invest in fossil fuel companies. While it may be important for financial and other reasons to try to avoid divesting from companies who are acting ethically with respect to the climate crisis, there is no ethical imperative to pursue new investments in these or other companies when alternative strategies exist. The key question for Dalhousie to consider is whether our current investment approach is consistent with the moral and ethical standards shared by the Dalhousie community, and if it is consistent with Dalhousie's commitments to take a defining role in addressing climate change and improving environmental stewardship.

The committee agrees that investing in a company whose current worth is significantly dependent on its ability to explore fossil fuel assets is unethical within

⁷ <https://www.ec.gc.ca/indicateurs-indicators/default.asp?lang=en&n=F60DB708-1>

the context of global climate change, especially given that known reserves already exceed levels which would lead to significant risk of climate change if fully developed. However, this committee also recognizes that there is still a percentage of petroleum resources which will need to be developed responsibly during the transition to carbon neutrality, and that Dalhousie's investment policy can be adjusted to maintain investment within this sector based on clearly defined ethical guidelines and the requirement for active initiatives by companies to address climate change.

Responsibility for climate change, efforts to support continued denial of climate change, or efforts to otherwise systematically undermine environmental stewardship should all be considered as part of an ethical approach to investment at Dalhousie. A balanced assessment would also consider constructive efforts to support efforts to address climate change and environmental stewardship.

By developing and adopting ethical guidelines for investment at Dalhousie which includes provisions on climate change and environmental stewardship, the decision to invest or divest can be made through systematic consideration of the corporate actions of individual companies. This would enable Dalhousie to selectively support companies which are acting as constructive partners in solving the climate crisis while strategically divesting from companies with historically poor records in this area who have not demonstrated significant reform. This would also allow for a nuanced approach which does not infer broad-based condemnation of the fossil fuel sector.

There will be costs of divesting, but they are warranted on ethical grounds.

There appear to be two forms of potential costs associated with divestment: direct costs from the financial divestment process itself, and indirect costs resulting from the political ramifications of publicly withdrawing support from an industrial sector which provides financial support to academic programs and activities at Dalhousie.

With respect to direct costs and portfolio performance, the Board of Governors investment committee indicated that they did not expect a substantial difference in the investment portfolio's performance under a divestment scenario, but could incur a financial penalty associated to changing the composition of the current portfolio to comply with the originally proposed divestment initiative. Given the current condition of the market, the investment committee's view on divestment and portfolio performance may have changed now that commodity prices are depressed, and should be revisited.

The potential for indirect costs associated with divestment were raised by several respondents. Within the areas of concern identified, the degree of risk was not quantified, likely due to the challenges associated with predicting external party responses to varying degrees and forms of divestment.

As a general principle, this committee supports the suggestion that ethical considerations should form part of Dalhousie's approach to investment. If the university community concludes that there are ethical concerns with some of our current investments, it is imperative that we address this problem and do not allow financial considerations to out-weigh ethical obligations. The key would be to develop clear and transparent ethical requirements for Dalhousie's investment practices that have broad support from the Dalhousie community, and a formal mechanism by which ethical concerns over specific existing holdings can be raised within the context of these guidelines on an individual basis. This process must be transparent and focused in practice as the perception of broad-based condemnation of a specific industrial sector rather than specific divestment of investments of concern may lead to unintended financial consequences. This is consistent with the approaches taken by several universities who have considered divestment and potential solutions to these ethical obligations. Our effort in section 2 to extract principles from the submissions received is intended to start this important dialogue, not replace it.

Divestment is a matter of justice, protecting the most vulnerable, many of which have no control over what happens in developed countries where most of the emissions take place.

This committee, and the Dalhousie community, appear to agree that the need to act on climate change is a matter of distributive justice, whereby the impacts of climate change are expected to be disproportionately felt by youth, future generations, developing countries, and by demographics who have contributed little to the problem. Inter-generational justice is a particularly significant issue in the university context, as youth studying at our university have limited avenues to affect policies governing the state of the environment they will inherit. Society relies on universities to bring complex issues of justice to the fore, and the students and staff at Dalhousie who have raised these issues should be commended on their activism and initiative. If we want our students to be leaders for change, we must encourage them.

Dalhousie and other universities need to show moral and ethical leadership in societies.

Universities have historically served a leadership role on a variety of social justice issues, including feminism, civil rights, LGBT rights, and apartheid, to name a few. The world is a better place because of campus leadership, and this committee suggests that the actions taken by Dalhousie need to be sensitive to its role in society. A key role, one that has grown in importance in a time where commercial interests dominate so many aspects of our lives, is to be a voice for facts, truth, and justice. A number of submissions received during this process highlight Dalhousie's

existing commitments under a variety of declarations to take a leading role in environmental stewardship and sustainability.

The *1991 Halifax Declaration*⁸, which included presidents and senior executives from 33 universities from 10 countries, attempted to assess “the role of universities regarding the environment and development”, opening with the following declaration:

“Human demands upon the planet are now of a volume and kind that, unless changed substantially, threaten the future well-being of all living species. Universities are 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.”

In the Declaration, the then President of Dalhousie, Howard Clark, is quoted as saying:

“If the university is to provide leadership in sustainable development, must it not first set its own house in order? Can universities provide leadership in debate on the social and ethical dimensions of sustainable development at a time when many question the university’s role in the development of ethics and ethical positions? And yet if the university does not provide such leadership and does not produce graduates who genuinely live the principles of sustainable development, who will, and what hope is there for us?”

Dalhousie was also a signatory of *The Talloires Declaration*⁹, which contains a ten-point action plan for the *Association of University Leaders for a Sustainable Future*, specifically highlights the university’s responsibility to:

“Use every opportunity to raise public, government, industry, foundation, and university awareness by openly addressing the urgent need to move toward an environmentally sustainable future.”

The *UNEP International Declaration on Cleaner Production*¹⁰, which are “guidelines developed for government, company, and ‘facilitating organization’ (i.e. academia, institutes, industry associations, etc.) ...” includes additional commitments made by Dalhousie University, such as

“Leadership: using our influence to encourage the adoption of sustainable production and consumption practices through our relationships with stakeholders.”

Also, along with 23 other University Presidents, Vice Chancellors, Provosts, and CEOs, Tom Travis, the then president of Dalhousie signed the *University and College President’s Climate Change Statement of Action for Canada (2008)(UCPCCSAC)*, which states:

⁸ <https://www.iisd.org/educate/declarat/halifax.htm>

⁹ http://www.ulsf.org/programs_talloires.html

¹⁰ <http://www.unep.fr/scp/cp/network/pdf/english.pdf>
<http://www.unep.fr/scp/publications/details.asp?id=WEB/0134/PA>

“We believe that Canadian universities and colleges have a unique opportunity to advance society towards sustainability through teaching, research, demonstration and accelerating societal solutions beyond campus.”

As signatory to these documents, Dalhousie University broadly supports taking an active role in moral and ethical leadership. This committee views divestment, if implemented thoughtfully and on carefully developed ethical guidelines broadly supported by the Dalhousie community, as an important part of demonstrating ethical leadership on the climate change problem. Other approaches have been suggested in the responses received through this process, which should prompt increased dialogue and strategic evaluation of current efforts at an institutional level to ensure Dalhousie’s efforts to maintain leadership status in the area of sustainability, environmental stewardship and advocacy of responsible development do not stagnate.

Divesting is an important symbolic gesture to support the transition to a fossil fuel free world that could lead to a meaningful impact.

Proponents of divestment sometimes advocate its use as a political gesture to create consensus for policy change. The majority of respondents within Dalhousie’s community would support the transition to a fossil free world. The withdrawal of support for a specific industry sector was recommended by several submissions but was raised as an area of concern by others. This is an important consideration to be included in formulating an ethical investment strategy and implementing it at an institutional level as a financial means of influencing climate change. Many were supportive of taking a leadership role in developing policies and technologies which affected climate change, but opinions varied across respondents on whether or not the publicly portrayed symbolism of divestment was consistent with this more broadly accepted goal.

It is this committee’s view that divestment itself could provide one of a number of mechanisms for making a symbolic gesture regarding climate change. It is important that the intent behind Dalhousie’s action on ethical investment practices be expressed explicitly and transparently with full engagement of the Dalhousie community, as confusion existed amongst the respondents of this process as to the nature of the symbolic gesture being sought.

The attitude against divestment is the same attitude that has prevented the world from solving the problem, not taking responsibility for ones contribution to the problem and waiting for others to act first.

This committee agrees that Dalhousie needs to consider the underlying concerns that have led to the divestment movement and take action at an institutional level to address these concerns. Continued deferral of this issue is not recommended.

Divesting campaigns in South Africa against apartheid are comparable and were successful, the impacts are not primarily financial, and they are political and ethical in nature.

A distinction must be made between the moral or ethical comparison of the fossil fuel sector to the apartheid regime and the reference made to the historical role divestment has played in affecting change. This committee agrees that it is simplistic to draw overall comparisons between climate change and apartheid. However, there are some parallels, including the need to signal to those who oppose an effective and adequate response to the climate crisis that their conduct is unethical and will not be endorsed or condoned by Dalhousie. The comparison to apartheid has been made because divestment was an important symbolic act that led to the elimination of the apartheid regime, and may help to create a political consensus for substantive climate change policy. The fact that there are important differences between apartheid and climate change does not exempt Dalhousie from its obligation to carefully consider whether its current approach to investment is ethically sound, and more specifically whether the current approach is consistent with its ethical duty to do what it can to help prevent a climate crisis.

This committee suggests that any potential response from Dalhousie University to the climate crisis be carefully considered on its own merits. A superficial comparison does little to ensure that we take a principled constructive approach to our investments and more broadly to ensuring we are part of the solution.

Divesting is supportive of some existing professional codes of ethics governing practice by Dalhousie employees and sustainability agreements to which Dalhousie is a signatory.

It is encouraging that there are existing codes of ethics and sustainability agreements that commit individuals within Dalhousie to being part of the solution. This committee feels that there should be no doubt about Dalhousie's ethical obligation to do what it can on the issue of climate change. While the existence of such individual and professional commitments is helpful, Dalhousie's ethical obligations in this regard are not in any way conditional or otherwise dependent on such prior commitments. Dalhousie should determine its course of action based on an institutional assessment of the ethical imperatives and available evidence.

Viewpoints against divestment

Divestment treats a large number of companies the same, regardless of their degree of transparency and on-going activities towards addressing climate change and alternative energy solutions.

This committee agrees that Dalhousie must develop and adopt nuanced ethical guidelines for investment that may or may not result in companies identified in other divestment campaigns falling outside Dalhousie's acceptable guidelines. It is important that decisions to withdraw or maintain investment in specific companies are seen to be the result of our own ethical guidelines and careful consideration, rather than external socio-political pressures and broad-based condemnation of a given industry sector.

The original proposal submitted to the Board of Governors by Divest Dal should be viewed as a catalyst for dialogue, providing feedback on ethical and moral standards shared by this group and offering a starting point for these discussions within the broader Dalhousie Community. Many of the specific items raised within this response may also form elements of the basis for assessing the suitability of specific investments. Once guidelines enacted at Dalhousie identify an investment is not justified on ethical grounds, financial and other practical considerations should not trump legitimate ethical concerns. The development and/or refinement of such guidelines can only aid Dalhousie in identifying new opportunities and risks in the future.

A moral requirement to address climate change does not equate to a moral justification for divestment.

Dalhousie's investment decisions are not shielded from its ethical duty to contribute to solving climate change. As an institution, we should do everything reasonably within our power to help solve this critical problem, and should be seen doing so. This means we have an obligation to consider whether our current investment policy is ethically defensible with respect to climate change, and whether it should be altered.

This committee is in general agreement with the response received, but views the status of moral equivalency as irrelevant within the context of the shared ethical requirement to affect climate change. Divestment is one of a number of potential approaches to enacting solutions to climate change, and should be evaluated on its own merits within the larger suite of available actions Dalhousie should take. This is neither an endorsement nor rejection of divestment, but recognition of its use in a variety of formats by institutions as part of their strategic efforts in meeting their moral and ethical obligations to promote a sustainable future. Whether divestment

is a useful tool very much depends on the implementation issues we have discussed in detail throughout this report.

Divestment is not comparable to apartheid. To place the fossil fuel companies into the same category as apartheid is an attempt to attribute responsibility for climate change to a few organizations when it is a far broader issue.

Some proponents of divestment have attributed greater responsibility to the fossil fuel industry due to historical and on-going practices by some corporations within this sector to support climate change denial, thereby delaying action on climate change. This committee recognizes that the broader climate change phenomena is linked to our current state of development and historical choices made by individuals, governments and corporations, and cannot be solely attributed to one industry. At the same time, historical and current actions to actively undermine effective action on climate change at a global, national and subnational level should be taken into account in developing and implementing an ethical approach to investment at Dalhousie.

Greenhouse gas emissions are caused by virtually all sectors of the economy through the requirement for energy, and in the case of some sectors through non-energy sources of greenhouse gas emissions. Divestment from fossil fuel companies and the adoption of policies which reduce support for the fossil fuel industry may increase the base cost of fossil fuels, which is the most direct means of enacting change further down the supply chain. When energy-intensive sectors (including the oil and gas sector) and individual consumers experience higher prices due to higher energy costs, financial incentives exist to increase efficiency, reduce consumption and seek out alternative energy sources.

Divesting is hypocritical as it singles out those who extract fossil fuels while we all still rely on them and will continue to for some time.

Companies will be needed to provide the world with the fossil fuels until the transition away from fossil fuels is complete. The fact that a company is providing fossil fuels during this transition alone is not an appropriate basis for divestment, just as it is not necessarily hypocritical for an individual to continue to use fossil fuels in areas where a reasonable alternative is not yet available. The ethical consideration is whether companies are partners in the transition to a fossil-free world.

Divesting will not (or only minimally) contribute to addressing climate change.

Addressing the complex issue of climate change will inherently involve a diverse range of initiatives and actions. It is thus constructive to consider the impact a particular measure will make relative to other measures with similar outcomes. That being said, the climate crisis is too complex an issue to justify selecting only measures that are proven to be the most effective in solving the problem, and is too urgent an issue to continually delay action through debate about the relative merits of actions that have an opportunity to contribute. Divestment should be evaluated alongside other similar initiatives within the context of a diverse approach to addressing climate change, with the intent of Dalhousie developing and implementing strategic initiatives.

Educational & Enrolment Considerations

Viewpoints supportive of divestment

Divesting might enhance the credibility of sustainability oriented programs throughout the university.

There are a significant number of sustainability-oriented programs at Dalhousie and many people – students, parents and employers – could reasonably view those programs more credibly if a divestment strategy was adopted. We agree that a principled, well thought out approach to divestment has the opportunity to enhance sustainability oriented programs at Dalhousie. At the same time, an approach to divestment that ignores or only superficially considers the complexity of the issue risks being harmful to the credibility of the university.

Divesting may increase enrolment in sustainability oriented programs.

Potential benefits in enrolment within sustainability oriented programs would be a secondary result of divestment, linked more directly to the media exposure Dalhousie would gain through this action rather than the action itself. A number of universities which have partially divested have used the opportunity as a marketing strategy to promote their sustainability-oriented programs and on-going research linked to reduced greenhouse-gas emissions and use of fossil fuels. It is reasonable to assume that a similar approach by Dalhousie would yield benefits in terms of increased enrolment in these programs. It is likely that the University would be able to include the fact that it took a leading position with a divestment strategy in promotional materials. This would be a factor in the choice of where to study for some students. We have no basis to reach conclusions on the actual impact on quality and numbers of applicants under a divestment scenario.

The marketing benefit of the ethical investment guidelines that we propose will depend upon the communications approach. Should Dalhousie treat it as “partial divestment” then similar results to other universities might be realized. If Dalhousie decides to adopt ethical investment guidelines without declaring divestment, then some of the marketing advantages may be lost.

Divesting may be attractive to some candidates for faculty positions.

Enhancing the pool of candidates for open positions tends to improve the overall quality of appointments over time. It seems likely that some candidates would be more inclined to consider applying for a position at Dalhousie if a divestment stance is taken. However, it is also possible some other candidates are discouraged by such a stance. We agree that a principled, well thought out approach to investment offers every opportunity to make Dalhousie attractive to candidates for faculty positions. At the same time, an approach to divestment that ignores or only superficially

considers the complexity of the issue risks being harmful to the credibility of the university. We agree that the adoption of ethical investment standards will be viewed positively by candidates for faculty positions across all disciplines.

Many departments see either no or positive direct impacts.

This seems likely. There are only a few departments that seem likely to be impacted directly, and even then the impacts are not entirely obvious. We are generally encouraged by the constructive manner in which academic units across the university have engaged on this issue.

Viewpoints against divestment

Divesting may limit academic freedom (freedom of inquiry) by restricting funding opportunities for researchers studying geological structures or processes of interest to fossil fuel extraction industries.

It may be that some sources of funding decrease (such as grants or contracts for oil or gas extraction technologies), but this is not a limit on academic freedom. Almost all scholars face loss of research funds at some point in time. We were provided with no evidence that divestment limits academic freedom. The closest any submission came to making a concrete link is the suggestion that divestment would affect the funding Dalhousie would receive for education and research. In our view this does not justify a conclusion that divestment would limit academic freedom. On the contrary, if anything, it suggests that our current reliance on funding from fossil fuel companies may limit our academic freedom, as this concern suggests that Dalhousie as a university cannot speak out against actions of its funders.

Likewise, the Committee agrees that the adoption of ethical investment standards does not constitute a restriction on academic freedom.

Diversity of research and educational views, even those in apparent contradiction, is a hallmark of a university.

We fully agree that Dalhousie should embrace a diversity of views on climate change and on possible solutions to this problem. We should be careful to ensure that our decisions on divestment do not in any way limit the ability of academics to express their views. This does not mean, however, that Dalhousie cannot take a stand on whether to invest in companies that it concludes are taking inadequate steps to address the problem of climate change, companies that are or have proactively fought against solutions to climate change, or companies that are overvalued because of their investment in parts of the economy that are not part of the solution to climate change.

Students and faculty working in academic units who work with the fossil fuel industry (such as earth sciences) may feel alienated.

To address this concern, we feel that it is important that any decision on this issue is preceded by a thorough and open conversation involving all interested members of the Dalhousie community. There is no reason for any member of the Dalhousie community to feel alienated by Dalhousie's ultimate decisions on this important issue. The fact that this has been raised as a concern is in our view an indication that decisions on this issue so far have not been adequately transparent and have not been based on adequate engagement of the Dalhousie community - on either side of the debate.

Divestment is a contentious political issue. We propose that one way to depoliticize the issue (should that be desirable) while meeting the underlying goals apparent in the majority of submissions is to adopt an ethical investment strategy.

Divesting may adversely affect academic programs that work in partnership with the fossil fuel industry, reducing support for education enhancement programs.

This may happen with a few programs, although evidence that it will happen is lacking, and the possibility of finding replacement funds still needs to be explored. At present, students in some industry supported programs have benefitted with learning experiences not available to students at other universities. The loss of industry support would not mean the end of a degree option, but could make the experience less exceptional. The risk of negative reaction from industry can be reduced by making an informed decision following full engagement, and by carefully considering and articulating the nature of the change and the reasons for it. At the end of the day, however, Dalhousie needs to do what it considers to be right, not what it feels some of our industry partners would like us to do.

Financial & Research Considerations

Viewpoints supportive of divestment

It is financially risky to continue to invest in companies that hold significant stranded assets in the form of fossil fuels that cannot be used.

We agree that the financial risk posed by the "carbon bubble" is a serious concern, but have received limited evidence to date to help us quantify it. Full consideration would require careful analysis of the companies in question, their assets, and their full range of activities and plans. This is beyond the mandate of this committee.

Divesting will open up new opportunities for funding from sources that support the transition away from fossil fuels.

This could be significant. Donors are very much moved by their hearts and beliefs. We have already been beneficiaries of gifts to help us improve our understanding of environmental issues. The opportunity for donors to specifically opt for their donations to be placed in fossil-free portfolios would provide opportunities for more gifts by environmentally-conscious investors. Similarly, previous donors may appreciate the opportunity to express their desire for their prior investments to be re-directed towards a divested portfolio. Development of an ethical investment strategy in general might encourage more donations to Dalhousie.

Decisions about the University's investment and endowment should remain independent from our procurement of outside research and academic funding.

Academic freedom was raised as a potential justification for divestment, implying that continued involvement on campus by industries contributing to greenhouse gas generation biases academic programs and strategic allocation of resources to support these industries. The majority of concerns currently expressed with links between endowments and academic positions imply that faculty positions sponsored through industry are heavily tied to the interests of those industry partners, thus limiting the freedom of faculty within those positions to pursue other research areas and biasing the curriculum delivered by these faculty.

It is unlikely that these ties severely limit the academic freedom of the faculty members or academic units involved, as the formation of these positions are only possible through the support of specific academic groups and shared research interests between the faculty member and the sponsoring industry partner. What is viewed as bias exposure by one academic group may be considered relevant industry-based training by the academic units engaged in more direct partnerships.

Universities should embrace the internal contradictions and diversity of views inherent in the way various fields are taught and researched, and should take care in adopting policies or political views which may specifically impose limitations on programs involved with targeted industry sectors. As a counterpoint, it is also imperative that the university ensures partnerships do not affect the ability for programs to deliver balanced curriculum; highlighting the socio-economic issues inherent to activities leading to climate change.

Viewpoints against divestment

Divesting will reduce funding from the fossil fuel industry for academic programs.

It is not possible to assess in advance the response from industry which would result from the political statement accompanying any form of divestment. Companies within the energy sector could choose to limit or withdraw funding, or may choose to increase funding and use the opportunity to market their commitment to reducing greenhouse gas emissions and support research and teaching initiatives which would allow them to improve their own standards and policies. In the interests of quantifying potential risk, historical financial data from the past five years indicates that the fossil fuel sector contributes on average 1 million dollars per year to research activities at Dalhousie, under 1% of Dalhousie's total annual research and contract funding. The potential impact of the political statement which could be construed as targeting a single industry might be mitigated by choosing to adopt an ethical investment policy instead.

In an effort to quantify the potential impact, one might consider current industry-sponsored initiatives which, under a worst-case scenario of withdrawal of external support, would need to be funded through other sources. Examples might include Shell's involvement through the experiential learning fund (\$500,000 over 3 years), industry-sponsored academic positions which may require independent funding to be sought from alternative sources, and capital fundraising for infrastructure renewal which could feasibly be impacted by divestment. If divestment were pursued at an institutional level, improved understanding is needed of the financial implications of withdrawal of industry support from these and similar programs so that alternative funding sources could be brought into place to mitigate loss of support.

Divesting will reduce industry research funding including the funding of industrial research chairs.

We have received no evidence on the net effect of a divestment decision on research funding. It is reasonable to expect that such a decision would come with financial risks and opportunities. The extent of the risk and opportunity would undoubtedly depend on the specific changes that are actually made to Dalhousie's investment policy.

Divestment could lead to the return of endowments (e.g. funded chairs) from funding sources with fossil fuel links.

We have received no evidence on the net effect of a divestment decision on endowments. To be clear, the divestment proposal considered by the Board of Governors did not affect endowments, other than the possibility that a donor might in the future make different decisions about endowments in light of a divestment decision. It is reasonable to expect that any investment or divestment decision would come with financial risks and opportunities. The extent of the risk and opportunity will undoubtedly depend on the changes that are actually made to Dalhousie's investment policy. It would be prudent to investigate these risks and opportunities while the appropriate policy is developed, as such an investigation will enable Dalhousie to minimize the risks and take advantage of the opportunities.

Divesting will reduce donations to Dalhousie.

The merits behind this concern are similar to those behind perceived benefits of divestment in terms of impact on donations and gifts. If it is reasonable to assume that divestment will lead to increased donations by groups supportive of the divestment movement, then it is also reasonable to assume that donations will decrease from groups not supportive of divestment. Dalhousie's current fundraising initiatives linked to capital expansion and academic programming should be reviewed to identify the potential implications of reduced support from the energy sector on these activities. While the actual impact, if any, of divestment on these activities is difficult to predict in advance, the financial risk associated with a negative response from industry can be quantified to determine if complete loss of support from this sector would significantly affect current activities within the University.

Reputational Considerations

Viewpoints supportive of divestment

Being an early adopter of divestment will present advantages for Dalhousie in terms of marketing and reputation (for enrolment and funding).

The marketing value of divestment is currently uncertain, will depend on developing a well-reasoned defensible position and should be explored alongside other communication avenues. This committee feels it is reasonable to assume that Dalhousie could leverage the marketing potential surrounding a sound investment or divestment policy to promote specific academic and scientific programs, as well as the sustainability initiatives on campus. If Dalhousie were one of the leading institutions to pursue divestment in Canada then it would likely receive greater media attention than if it pursued this action after other institutions in Canada.

Divestment will increase Dalhousie's reputation as an organization focused on sustainability and the environment.

This committee agrees that it is reasonable to assume proper marketing of steps towards ethically transparent financial investing policies and changes in strategic initiatives could benefit Dalhousie's reputation and enrolment in this area. This would, however, only be sustained if accompanied by increased activity by faculty members with complementary research interests and improved external relations highlighting Dalhousie's role in advancements in these areas. Dalhousie's reputation in the areas of sustainability and the environment is not solely defined by its status as a divested institution.

Viewpoints against divestment

Divesting will alienate some alumni from programs that have strong links to the fossil fuel industry, specifically in earth sciences and engineering.

All forms of divestment carry with them a symbolic gesture of withdrawing support from the fossil fuel industry beyond simply the financial, as evidenced in the media releases, terminology and tone of current pro-divestment campaigns. This committee agrees that divestment will possibly result in alumni, students and staff of some programs feeling alienated due to the message surrounding this movement. The inverse of this is also true: failing to take into consideration the concerns raised over climate change and Dalhousie's need to become a more visible and active

leader in this area through strategic action will lead to disenfranchised students, faculty and alumni in programs strongly linked to sustainability.

To address this concern, this committee stresses the importance of thorough and open conversation involving all interested members of the Dalhousie community, including alumni, prior to any decision on this issue. This is not to say that any one party should have a veto over the ethical choices made by the Dalhousie community on this important issue, but their views should be heard, carefully considered, and the reasons for the ultimate choices made should be communicated to the broader community, including alumni, funders, and the broader public. Regardless of the path that Dalhousie chooses, there may be some disappointed with the outcome, though an open dialogue and a carefully thought out investment policy can serve to reduce this risk. The fact that some might oppose any action should not be used as a reason for not making a decision.

Divesting will affect Dalhousie's reputation and existing relations with industry sectors, isolating fossil fuel companies when they have to be part of the solution. As such, divesting will be counter-productive.

Any decision regarding financial holdings in a given company should consider the appropriate basis on which Dalhousie decides where to invest its money. This should include whether a particular company is a constructive partner in solving the climate crisis. There is no doubt that industry will be part of the solution, as was the case with the Montreal Protocol for phasing out CFCs. While the chemical industry strongly opposed this initiative during formation, they expanded their markets significantly following the agreement by replacing outmoded refrigerators and cooling systems. Action on climate change will similarly provide greater opportunities for the energy industry, which could extend into the university sector. Strategic divestment could provide a venue to highlight existing positive relationships and initiatives between Dalhousie and companies in this sector who are aiding in research to affect climate change, creating productive opportunities to expand Dalhousie's reputation in this area and foster growth of sustainability-based programs with effective avenues for change into industry.

Appendix A: Terms of Reference

Terms of Reference

AD HOC COMMITTEE OF SENATE ON FOSSIL FUEL DIVESTMENT

Revised by Senate, September 28, 2015

- (i) there be a renewed, well-informed discussion of fossil fuel divestment at a January 2016 meeting of Senate.
- (ii) to ensure that the discussion is well informed, that all academic units that self-identify as potentially affected by fossil fuel divestment be invited to submit a maximum two page summary statement outlining opportunities and threats of proposed divestment to an ad hoc committee of Senate, no later than September 30, 2015
- (iii) that an ad hoc committee of Senate composed of no more than knowledgeable persons be charged with receiving and providing critical evaluation of these reports and preparing a summary document collating the opportunities and threats of proposed divestment
- (iv) this document be brought to Senate for review and discussion in January, 2016 and, in the interests of transparency, be made available to all Dalhousie faculty members and the DSU.

AD HOC COMMITTEE ON FOSSIL FUEL DIVESTMENT MEMBERSHIP:

Jeremy Banks, Student Representative, Faculty of Architecture and Planning
Meinhard Doelle, Schulich School of Law
Adam Donaldson, Faculty of Engineering
Tom Duck, Faculty of Science
Ruth Forsdyke, Faculty of Science
Keith Taylor, Faculty of Science

Appendix B: Call for Submissions

Dear Members of Academic Units:

On December 8, 2014 Senate approved a motion creating an ad hoc committee to examine Fossil Fuel Divestment. The committee and its mandate were finalized in June, and it held its first meeting in July. By way of follow-up to the notice from Senate inviting input into its work, the ad hoc Committee of Senate on Fossil Fuel Divestment would like to invite all academic units who self-identify as potentially affected by fossil fuel divestment to submit to the ad hoc committee a two page summary statement outlining possible pros and cons from either divesting or not divesting to their academic programs and research. Units are encouraged to provide evidence where possible. Appendices and attachments are permitted.

To be clear, the ad hoc committee welcomes submissions from all departments, even if their faculty has already done so.

The committee's mandate identifies September 15th as the formal deadline for submissions, but the committee will continue to review submissions received on or before **September 30, 2015**. The ad hoc committee does not require the submissions to be approved by each Faculty Council, but would encourage units to develop their submission with open consultation throughout the unit, including student societies. The level of support the submission has received should be clearly identified. The ad hoc committee will receive these reports and prepare a summary document collating the possible pros and cons of proposed divestment and submit this to Senate. Additionally, all submissions will be attached to the final report as appendices.

Please distribute this request for a two page submission to all members of your academic units that may potentially be affected by fossil fuel divestment. Please note that the two page submission should be received by Andrea Power, Associate Secretary, Senate, University Secretariat by **September 30, 2015** at andrea.power@dal.ca.

If you have any questions, please contact Andrea Power, Associate Secretary, Senate.

Thank you.

AD HOC COMMITTEE ON FOSSIL FUEL DIVESTMENT:

Meinhard Doelle, Schulich School of Law

Adam Donaldson, Faculty of Engineering

Tom Duck, Faculty of Science

Ruth Forsdyke, Faculty of Science

Keith Taylor, Faculty of Science

Jeremy Banks, Faculty of Architecture and Planning

Appendix C – Summary of Responses Received

The following table summarizes the responses received from this committee’s call for feedback from the Dalhousie University community.

Table C-1: List of Submissions by Number

#	Academic Units & Corporations:	Scope of Input for Submission Received
0	Dal. Senate Committee	
1	Alan Pinder, Professor Faculty of Science	Individual
2	East Link	Information Submission
3	IDS	Approved by unit
4	Env. Science	Approved by unit
5	Chris Moore, Dean, F.O.S	Individual Submission
6	Schulich School of Law	21 faculty from unit
7	Phys. & Atm. Science	Impact statement
8	School of Social Work	Chair for School
9	Fountain School of Performing Arts	86 signatures from unit
10	Economics	65% of faculty from unit
11	DSU/ DSUSO	1800 students, DSU Council
12	David Anderson, Dean Faculty of Medicine	Individual submission
13	Faculty of Engineering	Approved by heads of departments
14	Phys. & Atm. Science	Approved by unit
15	Ian Hill, Acting Dean F.o.S.	Individual Submission
16	SRES	Approved by unit
17	Grant Wach, Professor Earth Science	Individual Submission
18	Carla Dickson, Earth Sci, MSc Cand.	Individual Submission
19	College of Sustainability	Director, reflects College Meeting discussion
20	Charles Carlisle, MSc Cand., Earth Sci	Individual Submission
21	Earth Science	Approved by Unit
22	George Tjensvoll Kitching, Alumnus	Individual Submission

Appendix D – Brief Discussion of Climate Change

The scientific consensus on climate change, as expressed in reports of the Intergovernmental Panel on Climate Change, is:

“Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased.” (IPCC AR5/WG1, 2013)

Greenhouse gas emissions from the burning fossil fuels (coal, oil and natural gas) have resulted in atmospheric CO₂ concentrations 42% above preindustrial levels and rising every year (WMO Greenhouse Gas Bulletin, 2014). These emissions are the primary anthropogenic driver of climate change, although other gases (including methane, the main component of natural gas) contribute as well. A record high annual global average surface temperature was set in 2014, and eight of the first ten months in 2015 have broken previous records (NOAA State of Climate Reports, December 2014 and October 2015).

Projections indicate that greenhouse gas emissions will need to be eliminated in the 21st century to limit total greenhouse warming to 2°C (IPCC AR5/WG1). No more than one-third of proven reserves of fossil fuels (IEA, World Energy Outlook, 2012), and one-tenth of potentially recoverable resources (McGlade and Ekins, 2015), can be consumed prior to 2050 if the world is to achieve the 2°C goal. A suite of mitigation options, including a transition to zero-carbon energy sources, energy efficiency measures, and a price on carbon are needed in addition to adaptation. Failure to reduce greenhouse gas emissions will result in considerable risks to food and water security, biodiversity, ecosystems, coastal regions (from sea level rise), infrastructure, health, and ocean acidification (IPCC AR5/WG2, 2013). There will be significant economic costs: It is estimated that without action climate change could cost Canada between \$21 and \$43 billion annually by 2050 (NRTEE, Paying the Price, 2015). In response, the G8 group of nations — including Canada — agreed to reduce greenhouse gas emissions by 80% by 2050 (G8, 2009).

It is important to recognize that the fossil fuel industry has not taken a neutral position on the science of climate change, despite early recognition of the problem by industry scientists (Nuccitelli, 2015). The historic funding of climate denial groups by Exxon Mobil (UCS, 2007) and Koch Industries (Greenpeace, 2010) in particular is well known. Total funding for climate change counter-movement groups in the US reached \$900 million annually by 2010 (Brulle, 2013). Although some fossil fuel companies are beginning to publicly acknowledge the dangers of climate change, funding for denial groups continues (Frumhoff and Oreskes, 2015). Nevertheless, owing to their substantial resources and capabilities, fossil fuel companies could play a positive role in fighting greenhouse warming.

IPCC AR5 (2013): <http://www.ipcc.ch/report/ar5/index.shtml>

WMO Greenhouse Gas Bulletin (Nov. 2014):
<http://www.wmo.int/pages/prog/arep/gaw/ghg/GHGbulletin.html>

NOAA State of Climate Report (Dec. 2014):
<https://www.ncdc.noaa.gov/sotc/global/201412>
<https://www.ncdc.noaa.gov/sotc/global/201508>

IEA, World Energy Outlook (2012):
<http://www.worldenergyoutlook.org/publications/weo-2012/>

McGlade, C. and P. Ekins, The geographical distribution of fossil fuels unused when limiting global warming to 2°C, *Nature*, 517, 2015. doi:10.1038/nature14016

NRTEE, Paying the Price: The Economic Impacts of Climate Change for Canada, 2011:
<http://www.collectionscanada.gc.ca/webarchives2/20130322143115/http://nrtee-trnee.ca/climate/climate-prosperity/the-economic-impacts-of-climate-change-for-canada/paying-the-price>

G8, Responsible Leadership for a Sustainable Future (2009):
http://www.g8italia2009.it/static/G8_Allegato/G8_Declaration_08_07_09_final,0.pdf

Nuccitelli, D., Is the fossil fuel industry, like the tobacco industry, guilty of racketeering?, *The Guardian* (29 September 2015). <http://www.theguardian.com/environment/climate-consensus-97-per-cent/2015/sep/29/is-the-fossil-fuel-industry-like-the-tobacco-industry-guilty-of-racketeering>

UCS, ExxonMobil Report: Smoke Mirrors & Hot Air (2007):
http://www.ucsusa.org/global_warming/solutions/fight-misinformation/exxonmobil-report-smoke.html

Greenpeace, Koch Industries Secretly Funding the Climate Denial Machine (2010):
http://www.eenews.net/features/documents/2010/03/31/document_cw_03.pdf

Brulle, R. J., Institutionalizing delay: Foundation funding and the creation of U.S. climate change counter-movement organizations, *Climatic Change*, DOI 10.1007/s10584-013-1018-7 (2013): <http://goo.gl/A7TjHF>

Frumhoff, P. C. and N. Oreskes, Fossil fuel firms are still bankrolling climate denial lobby groups, *The Guardian* (25 March 2015):
<http://www.theguardian.com/environment/2015/mar/25/fossil-fuel-firms-are-still-bankrolling-climate-denial-lobby-groups>