

Proposal to Northwestern's Advisory Committee on Investment Responsibility

Regarding Divestment from Fossil Fuel Companies

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Our Proposal

In order to respond to the urgent threat of climate change and fulfill its commitments to sustainability, Northwestern should follow a “stop, drop, and roll” policy as has been pursued by other leading universities. This would encompass an immediate halt in future investments from fossil fuel extraction and sales companies, a five-year period to drop existing investments, and rolling out a reinvestment plan in renewable energy companies.

According to the Carbon Underground’s Fossil Free Index (Appendix A), there are 200 top companies which emit the most greenhouse gases based on their calculated emissions from their reserves. The list includes the top 100 oil and gas companies, and the top 100 coal companies. Our proposal would mean divesting from any company in this list.

Northwestern has substantial holdings in coal, gas, and oil companies within the Carbon Underground’s list. Regarding coal, Northwestern has \$3.9 million directly invested in ArcelorMittal, BHP Billiton, Glencore, ITOCHU, Mitsubishi, and Rio Tinto. In terms of oil and gas, Northwestern has \$45.4 million directly invested in Anadarko Petroleum, Antero Resources, BASF, BHP Billiton, BP, Denbury Resources, Inpex, Noble Energy, Peyto E & D, Range Resources, Statoil, Total, Tourmaline Oil, and WPX Energy. This excludes Northwestern’s indirect investments in oil and gas through its commingled funds, which encompass approximately 90% of the endowment.

We propose reinvestment across a diverse portfolio of *non-fossil fuel companies*, with a particular emphasis on investment in renewable energies and energy efficiency.¹ Other leading institutions have successfully followed this path by divesting from fossil fuels and reinvesting in clean energy. For example, the University of California system divested \$200 million and plans on reinvesting in renewable energy. At this point in the energy economy, it is crucial that funds are allocated to building green infrastructure so that the global economy can shift away from fossil fuel reliance and toward a clean energy future.

The Board of Trustees has demonstrated concern surrounding the efficacy of fossil fuel divestment. Yet, when coupled with strategic and sustainable reinvestment, divestment can help both bolster the clean energy industry as well as fulfill Northwestern’s strategic mission of contributing to sustainable solutions, a proactive as opposed to solely extractive action to take in response to the largest threat to the environment and human rights of the 21st century.

The Environment and Climate Change

The phenomenon of climate change is widely accepted in scientific and academic communities, including by Northwestern University.² The evidence of anthropogenic climate change is clear and compelling, demonstrated foremost by rising global temperatures, as well as by warming oceans, shrinking ice sheets, glacial retreat, decreased snow cover, declining Arctic sea ice, sea level rise and acidification, and increased rates of extreme weather events.³ Since the 19th century, the average surface temperature of the planet has risen 1.62 degrees Fahrenheit, an increase and time span corresponding to

¹Examples of potential reinvestment opportunities include the Fossil Free Index or Cleantech Index:
<http://fossilfreeindexes.com/fossil-free-indexes-us/>
<http://www.cleantech.com/indexes/the-cleantech-index-ctius/>

² Northwestern News. Published June 8, 2017. Updated July 9, 2017.
<https://news.northwestern.edu/stories/2017/june/climate-change/>

³ NASA Global Climate Change Vital Signs of the Planet. <https://climate.nasa.gov/evidence/>

human-made emissions of carbon dioxide through the extraction and use of fossil fuels.⁴ There is scientific consensus that humans have triggered climate change through the extraction of fossil fuels, emitting CO₂ which absorbs heat.⁵ Northwestern research has corroborated these facts, starting on its own website: “The Earth is getting warmer, ocean levels are rising and extreme weather events are becoming more frequent.”⁶

Scientists warn that 350 parts per million (ppm) of atmospheric carbon dioxide molecules is the safe level before catastrophic environmental change.⁷ As of February 2018, this number rests at 408.35 ppm.⁸ Knowing that excess atmospheric carbon directly causes a global increase in temperature, and that the combustion of fossil fuels contributes more atmospheric carbon than any other human activity,⁹ the specter of climate change is no longer looming; it is upon us. There is also an upper limit on what is considered safe for the rise in global temperature beyond pre-industrial averages. An increase of more than two degrees Celsius¹⁰ sets the stage for frequent and widespread natural disasters, including major droughts, rise in sea levels, and increases in oceanic acidity.¹¹

As established by the United Nations Framework Convention on Climate Change, the 2015 Paris Agreement, global average temperatures must be kept well below 2°C above pre-industrial levels, and encourage limiting this increase to 1.5°C to reduce the detrimental effects of climate change.¹² If continuing upon our current path of extraction, the world is heading towards the catastrophic path of 5°C degree of warming.¹³ By investing in these companies, Northwestern is incentivizing future fossil extraction, putting itself at odds with its stated goals of reversing climate change and internationally agreed upon standards. While there are trillions of dollars of fossil fuels still resting under the Earth’s surface, they cannot be extracted if the world is to stay under that two-degree limit. There are three times more reserves that could be exploited today than are compatible with this limit, so these fossil fuels must be kept unburned and underground in order to comply with international obligations and scientific calls of warning.

Human Rights and Climate Change

Climate change arguably poses the single greatest threat to human rights in the 21st century. Not only do the scientifically-proven effects of climate change pose an existential threat to world environments and livelihoods, but they do so in an unequal manner: the countries and individuals with the

⁴ National Centers for Environmental Information, “Global Climate Change Indicators”
<https://www.ncdc.noaa.gov/monitoring-references/faq/indicators.php>

⁵ Consensus on consensus: a synthesis of consensus estimates on human-caused global warming. In Environmental Research Letters. 13 April 2016. <http://iopscience.iop.org/article/10.1088/1748-9326/11/4/048002>

⁶ Northwestern News. <https://news.northwestern.edu/stories/2017/june/climate-change/>
⁷<http://climatechange.medill.northwestern.edu/2016/11/29/artificial-trees-might-be-needed-to-offset-carbon-dioxide-emissions/>

⁸ CO₂ Now. <http://co2now.org/>

⁹ January 19th Snapshot of EPA Website https://19january2017snapshot.epa.gov/climatechange_.html

¹⁰ Carbon Brief Staff. December 8, 2014. Carbon Brief.
<http://www.carbonbrief.org/blog/2014/12/two-degrees-a-selected-history-of-climate-change-speed-limit/>

¹¹ Intergovernmental Panel on Climate Change. IPCC Second Assessment Climate Change 1995.
<http://www.ipcc.ch/pdf/climate-changes-1995/ipcc-2nd-assessment/2nd-assessment-en.pdf>

¹² United Nations. “The Paris Agreement.”
<https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>

¹³ McGlade, Christophe. Ekins, Paul. “The Geographic Distribution of Fossil Fuels Unused When Limiting Global Warming to 2°C.” Nature International Journal of Science. Volume 517. 187-190. January 8, 2015.
<http://www.nature.com/nature/journal/v517/n7533/full/nature14016.html>

lowest consumption of fossil fuel are likely to experience the strongest effects of their emissions. By investing in fossil fuels, Northwestern is thus investing in environmental injustice, and in an industry which directly poses a threat to the right to life, food, health, education, and to an adequate standard of living. In line with the University's commitment to "sustainNU," Northwestern cannot ignore its role in financing the inequality flowing out of the fossil fuel industry -- polluting indigenous peoples' lands, disproportionately contaminating low-income communities of color, and contributing to the many other human vulnerabilities caused by climate change.

This linkage has been clearly codified beyond dispute. In 2009 the United Nations High Commissioner for Human Rights became the first international body to conclude that "climate change threatens the enjoyment of a broad array of human rights," thus declaring an international legal duty to prevent climate change in order to defend human rights¹⁴. That same year, a study in the Northwestern Buffett Center Working Paper Series stressed that "among the linkages identified between human rights law and environmental protection, the problem of anthropogenic climate change has emerged as a central concern," a concern which has only grown in gravity in the nearly 10 years since the study's publication.¹⁵

In the 2015 United Nations Climate Change Conference in Paris, the role of human rights was again tied to climate change in the international arena, as UN Special Rapporteur John Knox declared that "states' human rights obligations also encompass climate change" and encouraged state parties to use a human rights approach in responding to the crisis, a call to action aligned with the environmental justice movement.¹⁶ Within this framework of increased international awareness, the difficulty of intergovernmental action and cooperation must be considered, further exemplifying the need for private actors such as Northwestern to play a role in the fight for the defense of climate change-threatened human rights.

The threat to human rights posed by fossil fuel emissions is not a predicted abstraction but an existing reality, as climate change has already begun to affect agricultural productivity, temperature, and the general functioning of ecosystems throughout the world, endangering food security and causing displacement among other disastrous effects. The harms of climate change are reverberating across the globe, increasing heat stroke and malaria, reducing food production and water supplies, and aggravating social conflict and starvation. Although wealthy countries are the main generators and profiteers of climate change, its worst effects plague countries who have not caused the problem, primarily in Africa and Asia, particularly in the Southern Hemisphere.^{17, 18} The burden of mitigating climate change has also been placed squarely on the shoulders of developing countries. Even if every country met their Intended Nationally Determined Contributions (INDCs), the amount of reduction in emissions pledged by each country in the 2015 Paris Agreement, there is a mitigation ambition gap between developed and developing countries, the former pledging to cut only 38 percent of their fair share of emissions, as opposed to the latter, which pledged to cut 126 percent of their fair share.¹⁹

¹⁴ OHCHR, Report of the Office of the United Nations High Commissioner for Human Rights on the Relationship Between Climate Change and Human Rights, U.N. Doc. A/HRC/ 10/61 (Jan. 15, 2009)

¹⁵ Shelton, Dinah. *Human Rights and Climate Change*. Buffett Center for International and Comparative Studies Working Paper Series. December 2009,

https://buffett.northwestern.edu/documents/working-papers/Bufett_09-002_Shelton.pdf

¹⁶ United Nations Human Rights Office of the High Commissioner. December 3, 2015.

<https://www.ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?Newsid=16836&Langid=E>

¹⁷ <https://www.sciencedirect.com/science/article/pii/S1462901105001103>

¹⁸ Mooney, Chris; study finds that the people hurt by climate swings didn't cause them

https://www.washingtonpost.com/news/energy-environment/wp/2018/05/02/scientists-just-showed-why-climate-change-is-enormously-unfair/?utm_term=.6e4b36607663

¹⁹ Sethi, Surya. "Ten Inconvenient Truths About the Paris Climate Accord." *The Wire*. Dec. 16, 2015.

<https://thewire.in/environment/ten-inconvenient-truths-about-the-paris-climate-accord>.

This phenomenon makes oil, gas, and coal consumption not just issues of climate change, but also of climate justice. Nomadic and agrarian communities face threats to their livelihoods and existence by harsh weather.²⁰ Inhabitants of low-lying islands have been forced to evacuate their homes from sea level rise, becoming “climate refugees.” Some Pacific islands-- like Tuvalu and Kiribati-- face possible extinction.²¹ In the Arctic, melting permafrost has forced villages to relocate and live in the constant possibility of eviction.²² 26 million people worldwide have already had to move due to the effects of climate change, and the Environmental Justice Foundation reports that figure could grow to 150 million by 2050.²³ In fact, the group estimates that 10% of the world’s population is at risk of becoming climate refugees. As a globally-minded institution with a proven record of international and justice-oriented thinking, Northwestern must consider the impacts of its investments on people throughout the world, particularly on the most vulnerable.

The environmental injustice of climate change is also domestic, as hundreds of studies conclude that people of color, ethnic minorities, indigenous persons, and low-income communities are faced with a higher burden of harmful environmental exposure due to fossil fuel emissions, though they are not emitting or polluting at higher rates.²⁴ Coal pollution negatively affects humans’ health, safety, and well-being around the world. Coal consumption releases toxins into the air, including mercury, nitrogen oxide, and sulfur dioxide; these pollutants in turn adversely affect people’s respiratory, cardiovascular, and nervous systems, leading to asthma, lung disease, blocked arteries, heart failure, strokes, and mercury poisoning.²⁵ The Clean Air Task Force in 2010 estimated that more than 13,000 premature deaths and 20,000 heart attacks were caused by pollution from coal-fired power plants in the United States.²⁶ The people hit the hardest by this pollution are the elderly, children, and people with pre-existing respiratory diseases. Furthermore, studies of air quality data have found that communities of color in the U.S. suffer worse air quality across many metrics.²⁷

Although coal production has adverse effects on everyone’s health, the risks of coal are not evenly distributed. There are two million individuals in the United States living within three miles of one of the 12 most polluting coal-fired power plants; out of these residents, the average annual income is \$14,626 and 76% are people of color.²⁸ 71% of African Americans live in counties that violate federal air pollution standards, as compared to 58% of the white population.²⁹ The effects on health caused by living in these coal-polluted areas are extremely concerning. Asthma affects African Americans at a 36% higher rate of incidence than whites. Medscape studies show that three times more blacks than whites die from asthma, and this ratio becomes 5:1 among children. By investing in the fossil fuel industry, Northwestern is investing in pollution, environmental injustice, and contributing to human rights violations.

²⁰ Sampson, Oliver. Mark Mattox. “Nomads Bear Brunt of Climate Change.”

<http://www.dw.de/nomads-bear-brunt-of-climate-change/a-5760315>

²¹ Leckie, Scott. Lewis, Dan. “Kiribati and Tuvalu will Drown Without Global Climate Action.” *The Ecologist*. November 11, 2010.

http://www.theecologist.org/blogs_and_comments/commentators/other_comments/680886/kiribati_and_tuvalu_will_drown_without_global_climate_action.html

²² Goldenberg, Suzanne. “America’s First Climate Refugees.”

<http://www.theguardian.com/environment/interactive/2013/may/13/newtok-alaska-climate-change-refugees>

²³ Vidal, John. November 2, 2009. “Global Warming Could Create 150 Million ‘Climate Refugees’ by 2050.”

<http://www.theguardian.com/environment/2009/nov/03/global-warming-climate-refugees>

²⁴ Mohai et al, 2010. *Environmental Justice* in the Annual Review of Environment and Resources 34:405-430.

²⁵ http://www.catf.us/fossil/problems/power_plants/

²⁶ http://www.catf.us/resources/publications/files/The_Toll_from_Coal.pdf

²⁷ Miranda ML, Edwards SE, Keating MH, Paul CJ. 2011. *Making the environmental justice grade: the relative burden of air pollution exposure in the United States*. *Int J Environ Res Public Health*, pp. 1755-1771.

²⁸ <http://www.naacp.org/page/-/Climate/CoalBlooded.pdf>

²⁹ *ibid.*

The Effectiveness of Divestment

Previous divestment movements have proven to be both powerful and effective. From tobacco to the South African Apartheid to Darfur, divestment movements have preceded and served as catalysts to restrictive legislation. Student organizers at top universities were critical to the success of these movements. Northwestern's decision to join many of its peer institutions in fossil fuel divestment will add to the impact of the global movement to create a sustainable future.³⁰

Part of the goal of divestment campaigns is to create stranded assets within fossil fuel companies. Stranded assets are essentially an investment made on the part of the company which has no future potential return in profit. According to one study, fossil fuel divestment campaigns, which are occurring on a global scale, "threaten to erode the social licence of some targeted companies and could increase their cost of capital."³¹

Already, \$6.09 trillion has been divested globally from 884 institutions and over 58,000 individuals. Should Northwestern divest, it would join a long list of peer universities such as Stanford, the University of California, Yale, Oxford, Syracuse, Johns Hopkins, the New School, Georgetown, and Columbia.³² Thus, divesting sends a global message in terms of financial totals and the potential for stranded assets. We believe that these messages will encourage a movement away from fossil fuels and towards renewables in the energy sector. Divestment would also send a powerful message to Northwestern's international network that the university is taking tangible steps towards its stated commitment to creating a sustainable future.

In 2014, Stanford's board of trustees voted to divest from publicly traded coal companies after a recommendation made from their Advisory Panel on Investment Responsibility and Licensing.³³ Stanford's implementation of its divestment plan means it will divest from the top 100 coal companies and cease all future investments. The board acknowledged the impact of the UN Intergovernmental Panel on Climate Change in its decision.³⁴ In a 2014 article, Buzz Schmidt, previously named "NonProfit Executive of the Year"³⁵ wrote that Stanford's decision to divest may not seem like a significant move but it has the possibility to influence other funds invested in the fossil fuel industry. "Stanford might influence the \$500 billion in college endowments, the \$1 trillion in charitable trusts and foundations, the trillions more in state pensions, etc. A trillion here, a trillion there—pretty soon it adds up to real money. More significantly, this strong statement lends weight and intellectual ballast to the larger movement to change policy."³⁶ Therefore, within the context of the global environmental movement, Stanford's divestment has

³⁰ Ansar, A., Caldecott, B., and Tilbury, J. (2014). Stranded assets and the fossil fuel divestment campaign: what does divestment mean for the valuation of fossil fuel assets? Oxford University Smith School of Enterprise and Environment Working Paper.

³¹ Ansar, A. Caldecott, B, and Tilbury, J. (2013). <https://www.tandfonline.com/doi/full/10.1080/20430795.2016.1266748>

³² Go Fossil Free Website. "Divestment Commitments." <https://gofossilfree.org/divestment/commitments/>

³³ Stanford News. 2014. "Stanford to divest from coal companies" <https://news.stanford.edu/news/2014/may/divest-coal-trustees-050714.html>

³⁴ *Ibid.*

³⁵ Sinclair, Matthew. GuideStar.Org December 1999. <https://www.guidestar.org/Articles.aspx?path=/rxa/news/articles/2001-older/arthur-buzz-schmidt-named-nonprofit-executive-of-the-year.aspx>

³⁶ Schmidt, Buzz. Non-Profit Quarterly. May 27, 2014. <https://nonprofitquarterly.org/2014/05/27/is-divestment-sufficient-the-impact-of-stanford-s-investment-policy/>

influenced the public consciousness. Should Northwestern divest, it would join the global effort to mitigate climate change.

The Economics of Divestment

While the human and environmental cost of investment in fossil fuels far exceeds any discussion of economics, the truth is that there is a diminishing return on investment in the fossil fuel industry. The industry is heavily subsidized by the government, receiving over \$20 billion annually in direct subsidies alone.³⁷ Friendly policy from federal and state governments certainly contributes to the industry's profitability – the collapsing coal industry is heavily propped up by last-ditch efforts to save it – but the profitability of continued investment is eclipsed by the hidden costs resulting directly and indirectly from the mining, burning, and consumption of fossil fuels. On a global scale, averting climate change will be significantly more affordable than mitigating it.³⁸ Additionally, as the rest of the world moves towards low-carbon economies, trillions of dollars in assets invested in fossil fuels will be stranded. This effect is known as the “carbon bubble,” and bursting this bubble could trigger a global economic crisis.³⁹

In addition to economic pressure, an equally important effect of fossil fuel divestment would come through the process of stigmatization, wherein the “uncertainty surrounding the future cash flows of fossil-fuel companies” would increase.⁴⁰ As a leading institution on the world stage, Northwestern's decisions are looked upon globally, and thus the effects of fossil fuel divestment and, in turn, stigmatization would prove far-reaching.

Discourse with Fossil Fuel Companies is not an Option

Oil and gas companies have historically made their views on climate change clear. They have denied the science of climate change and financed misinformation campaigns about the anthropogenic effects on earth's climate.

For example, Exxon Mobil funded climate change research throughout the 1980s. At an Exxon board meeting, one employee presented that “Fossil fuels contribute to most of the CO₂.”⁴¹ However in 1990, the company started to fund misinformation campaigns that questioned whether humans were causing climate change. According to the *Los Angeles Times*, the company “feared a growing public consensus would lead to financially burdensome policies.”⁴² In an internal memo, Exxon was supposed to

³⁷ Redman, Janet. Dirty Energy Dominance: Dependent on Denial. Price of Oil

http://priceofoil.org/content/uploads/2017/10/OCI_US-Fossil-Fuel-Subs-2015-16_Final_Oct2017.pdf

³⁸ Carrington, Damian. “IPCC climate change report: averting catastrophe is eminently affordable.” The Guardian. <https://www.theguardian.com/environment/2014/apr/13/averting-climate-change-catastrophe-is-affordable-says-ipcc-report-un>

³⁹ Harvey, Fiona. “‘Carbon bubble’ could spark global financial crisis, study warns” The Guardian. June 4, 2018. <https://www.theguardian.com/environment/2018/jun/04/carbon-bubble-could-spark-global-financial-crisis-study-warns>

⁴⁰ Atif Ansar, Ben Caldecott and James Tilbury, “Stranded assets and the fossil fuel divestment campaign: what does divestment mean for the valuation of fossil fuel assets?” [University of Oxford](http://www.oxford.ac.uk/press/9780198781111), 11 March 2015.

⁴¹ LA Times. <http://graphics.latimes.com/exxon-research/>

⁴² *ibid.*

“emphasize the uncertainty” of climate science.⁴³ Therefore, Exxon purposefully misled the public about climate science when they knew that their products were contributing to anthropogenic global warming.

The misinformation campaigns do not stop with Exxon. In 2015, the Union of Concerned Scientists acquired documents through a Freedom of Information Act request which show that fossil fuel companies including BP, Chevron, ConocoPhillips, Peabody Energy, Royal Dutch Shell, and the American Petroleum Institute, spent tens of millions of dollars on climate skepticism.⁴⁴ Using front groups as a shield, these companies funded elaborate astroturf campaigns to create what looked like a grassroots movement against climate action.⁴⁵ Fossil fuel companies sponsor scientists, most of whom have no expertise in climate science, to spread misinformation and create an echo chamber of climate change denial.⁴⁶ As stated before, Northwestern is directly invested in BP. These misinformation campaigns make one thing clear: fossil fuel companies have used elaborate and expensive methods of maintaining their profits. Therefore, we believe discourse with these companies is not an option in changing their practices regarding climate change, as they have misled the public on science which they used to champion.

Another alternative to divestment is proxy voting, whereby members of fossil fuel companies boards would vote to institute measures to mitigate the effects of climate change. However, this is not a worthy alternative because, as discussed above, fossil fuel companies have historically gone out of their way to maintain their bottom line. Voting to mitigate climate change is not in the financial interests of these companies and goes directly against their modus operandi. In addition, it has been reported that proxy voting in general does not work as a path toward making companies more ethical. Therefore, proxy voting is not a viable alternative to divestment from fossil fuel companies.

Northwestern’s Role

Given its publicized interest in sustainability and capacity for influence, Northwestern should be consistent in its commitments and transition to clean energy to its fullest capacity, a feat best achieved by fossil fuel divestment. As shown in previous citations, Northwestern as an institution as well as its scientists and professors have agreed upon the impacts of climate change, their anthropogenic cause, and the imperative to act in response. Furthermore, in its strategic plan and through the creation of the sustainNU program, Northwestern explicitly pledges to be a leader in sustainability and in addressing climate change.⁴⁷ Yet this mission rests in a striking contradiction; although the University has invested in sustainable programs, staff, and infrastructure, it invests far larger assets in companies that aggressively perpetuate the very problems it claims to be committed to solve.

The Strategic Sustainability Plan of 2017-2019 states sustainNU’s primordial mission to be the reduction, and eventual elimination, of the University’s contributions to climate change, as well as pledging to establish an institutional climate action plan by 2019.⁴⁸ Considering that Northwestern’s multi-million dollar investments in the fossil fuel industry represent a large contribution to climate

⁴³ *ibid.*

⁴⁴ Herrell, Jazmin. East Tennessee State University. http://faculty.etsu.edu/odonnell/2016fall/engl1028/student_essays/climate_change_denial.pdf

⁴⁵ Dunlap, Riley and Aaron McCright. “Organized Climate Change Denial.” *The Oxford Handbook of Climate Change and Society*. August 2011. 10.1093/oxfordhb/9780199566600.003.0010.

⁴⁶ *ibid.*

⁴⁷ Northwestern University Strategic Plan. <https://www.northwestern.edu/strategic-plan/>

⁴⁸ Northwestern University Sustainability Plan <https://www.northwestern.edu/sustainability/docs/sustainability-plan/NUStrategicSustainabilityPlan-2017-2021-web.pdf>

change, divestment must be included in this action plan in order to meet internally mandated obligations. There are also external obligations that must be respected. In June of last year, Northwestern signing the We Are Still In declaration, which states that “colleges and universities...will pursue ambitious climate goals, working together to take forceful action.”⁴⁹ Northwestern must remain true these commitments, and cannot do so fully without evaluating its investment practices.

Divesting from fossil fuels provide the most powerful means by which Northwestern can meet its commitment to sustainability and truly “sustainNU.” Moreover, the sustainNU plan states it will benchmark sustainability efforts against peer and best-in-class institutions. Until Northwestern divests from these extractive industries, it will continue to rank far behind the institutions that have already taken this important step, such as Yale, Johns Hopkins, Georgetown, and Columbia. Alternatively, a reinvestment in clean energy would allow Northwestern to join the ranks of these truly “best-in-class institutions.” Aligning investment with the University’s obligations to combat climate change would also be consistent with Northwestern’s tradition of supporting student activism, such as in the recent celebration of the Bursar Office Takeover in 1968 among other initiatives.

If reducing energy-related greenhouse gas emissions are in fact a “top priority” for Northwestern, the University must move beyond performative policies and pledges. Though we recognize the importance of implementing sustainable changes such as reducing energy consumption, divestment provides the opportunity to make a change outside of campus limits. Climate change is a daunting problem because the actions of individuals, even individual institutions, has a limited impact on the large scale. Encouraging collective action is the only path towards a livable climate. As a premier institution in research and higher education, Northwestern is in the unique position to lead by example as its decisions have global reverberations. Divestment would not only make a powerful statement, but also a tangible impact, and would allow the University to meet its so-far ignored obligations towards sustainability and ethical stewardship. Considering that “Northwestern strives to be exemplary in addressing sustainability (and) climate change,” the University must recognize that its most powerful capacity for meaningful change rests in changing its investment practices.

Conclusion

Climate change is no longer a distant worry but an imminent threat to global health and human rights. The Intergovernmental Panel on Climate Change (IPCC), a United Nations-led coalition of environmental scientists, has made this warning paramount. Their most recent report, published in October of 2018, lays out the necessary path we must embark on to save the planet: the world must remain below a warming of 1.5 degrees celsius from pre-industrial levels. If fossil fuel extraction and consumption is not dramatically reduced, catastrophic environmental damages will manifest as early as 2050: deadly heat waves, extreme droughts, extinctions, and dozens of feet of sea level rise. In the backdrop of this deadly warning is a call to action, our last resort.

There is clear path by which to mitigate the costs of global warming and remain under the crucial 1.5 degree celsius benchmark; by 2050, 80% of global electricity must come from renewable sources, and coal can only provide 7% of this electricity. By 2030, the world needs to cut its annual carbon emission by half. Given the difficulties of collective action on the governmental level, it is crucial for non-state actors and private institutions to spearhead the transition from fossil fuels to renewable energy.

Northwestern is in the unique position to set an example and make a meaningful impact in this movement by divesting from fossil fuels -- it is the most powerful way that the institution can match its stated beliefs with action. If we do not heed the IPCC’s warning, global warming will far surpass the 1.5 degrees celsius limit, and the catastrophic effects of climate change will continue to manifest in increasingly

⁴⁹ “We are Still In Declaration.” <https://www.wearestillin.com/we-are-still-declaration>

dramatic and costly ways. If fossil fuels continue to be extracted at the pace they are now, the IPCC predicts -- through evidence from 6,000 peer-reviewed studies -- that the world will warm to 2 degrees celcius, far surpassing a temperature compatible with *healthy human life*. In this type of world, 99% of the world's coral reefs will perish, global fisheries will drop by 50%, and the individuals facing water scarcity will double.⁵⁰

Fossil fuel companies are to blame for the emission of greenhouse gases and the profitization of an unsustainable industry. These companies internatize profits reaped from externalized costs. From the 1980s onward, Fossil fuel companies have also historically misled the public about the effects of greenhouse gas emissions. As stated before, negotiating with coal, oil, and gas companies to make them more "green" is not an option. Their financial bottom line necessitates fossil fuel extraction and use, putting them at odds with the global effort to mitigate climate change.

In order for Northwestern to enact meaningful change for the environment and humanity and prevent future fossil fuel extraction, it must divest from and cease all future investments in coal, oil, and gas companies immediately. By investing in these industries, Northwestern is ignoring the desperate call of last resort to save our planet -- plans to reduce fossil fuel emissions and switch to renewables must begin immediately in order to meet these goals.

Appendix A

Carbon Underground Fossil Free Index 2017

The Carbon Underground 200™ 2017

Rank	Coal Companies	Coal Gt CO ₂	Rank	Oil and Gas Companies	Oil Gt CO ₂	Gas Gt CO ₂	Total O&G Gt CO ₂
1	Coal India	32.039	1	Gazprom	7.046	36.844	43.889
2	Shaanxi Coal Industry	28.885	2	Rosneft	11.536	5.939	17.475
3	Adani Enterprises	25.311	3	PetroChina	3.363	4.309	7.671
4	China Shenhua Energy	22.305	4	ExxonMobil	3.956	3.079	7.035
5	Inner Mongolia Yitai Coal	14.849	5	BP	4.309	2.364	6.672
6	Yanzhou Coal Mining	10.633	6	Lukoil	5.285	1.280	6.565
7	China Coal Energy	9.492	7	Royal Dutch Shell	2.112	2.209	4.322
8	Public Power	9.339	8	Chevron	2.473	1.567	4.040
9	Exxaro Resources	8.928	9	Petrobras	3.516	0.508	4.023
10	Glencore	8.369	10	Novatek	0.550	3.377	3.927
11	Peabody Energy	7.998	11	Total	2.076	1.798	3.873
12	Bukit Asam	7.844	12	Tatneft	2.618	0.063	2.681
13	BHP Billiton	7.310	13	ENI	1.439	1.217	2.656
14	Foresight Energy	6.759	14	ONGC	1.518	0.796	2.314
15	Lu'an Environmental Energy	6.443	15	ConocoPhillips	1.236	0.830	2.065
16	BUMI Resources	5.499	16	Statoil	1.018	0.798	1.816
17	Shanxi Xishan Coal and Electricity	5.416	17	CNOOC	0.983	0.439	1.422
18	Mechel	5.308	18	Inpex	0.908	0.328	1.236
19	Mitsubishi	5.128	19	Canadian Natural Resources	0.873	0.322	1.195
20	China Coal Xinji Energy	4.873	20	Sinopec	0.657	0.391	1.048
21	Raspadskaya OAO	3.968	21	Bashneft	1.007	0.000	1.007
22	Alliance Resource Partners	3.893	22	Occidental	0.706	0.206	0.912
23	Arch Coal	3.878	23	EOG Resources	0.621	0.181	0.802
24	Anglo American	3.592	24	Repsol	0.247	0.550	0.797
25	DaTong Coal Industry	3.508	25	Antero Resources	0.281	0.513	0.794
26	China Cinda Asset Management	3.316	26	Suncor Energy	0.732	0.002	0.733
27	EVRAZ	3.189	27	EQT	0.055	0.672	0.727

28	Vale	3.179	28	Imperial Oil	0.617	0.020	0.637
29	Rio Tinto	2.710	29	Range Resources	0.203	0.429	0.632
30	Severstal	2.661	30	Marathon Oil	0.495	0.133	0.628
31	Tata Steel	2.643	31	Ecopetrol	0.460	0.167	0.627
32	Westmoreland Coal	2.529	32	Anadarko Petroleum	0.374	0.241	0.615
33	Jastrzębska Spółka Węglowa	2.516	33	Devon Energy	0.304	0.307	0.611
34	Resource Generation	2.441	34	BASF	0.205	0.384	0.589
35	Teck Resources	2.376	35	Chesapeake Energy	0.225	0.354	0.579
36	United RUSAL	2.233	36	Noble Energy	0.207	0.289	0.497
37	Adaro Energy	2.200	37	Apache	0.330	0.156	0.486
38	AGL Energy	2.144	38	Continental Resources	0.272	0.207	0.479
39	Shanghai Datun Energy Resources	2.032	39	Cabot Oil & Gas	0.020	0.451	0.471
40	Yang Quan Coal	2.023	40	BHP Billiton	0.195	0.262	0.458
41	Shanxi Lanhua Sci-Tech	1.959	41	Hess	0.327	0.092	0.419
42	Whitehaven Coal	1.946	42	YPF	0.235	0.159	0.395
43	Kuzbasskaya Toplivnaya	1.890	43	OMV	0.266	0.123	0.389
44	Cloud Peak Energy	1.886	44	Cenovus Energy	0.351	0.033	0.385
45	CONSOL Energy	1.807	45	Woodside Petroleum	0.042	0.318	0.360
46	South32	1.712	46	CONSOL Energy	0.019	0.318	0.337
47	New Hope	1.635	47	KazMunaiGas EP	0.290	0.026	0.316
48	Yancoal Australia	1.622	48	Southwestern Energy	0.019	0.265	0.284
49	NACCO Industries	1.459	49	Encana	0.091	0.192	0.283
50	Huolinhe Coal	1.387	50	Concho Resources	0.181	0.095	0.277
51	ITOCHU	1.361	51	Husky Energy	0.168	0.107	0.275
52	Beijing Haohua Energy Resource	1.317	52	Seven Generations Energy	0.158	0.113	0.271
53	NLC India	1.296	53	Pioneer Natural Resources	0.199	0.069	0.268
54	Novolipetsk Steel	1.236	54	Tourmaline Oil	0.044	0.222	0.265
55	Indika Inti Corpindo	1.182	55	SK Innovation	0.263	0.000	0.263
56	Datang International Power Generation	1.147	56	QEP Resources	0.119	0.139	0.258
57	Coal of Africa	1.137	57	PTT	0.072	0.184	0.256
58	Golden Energy Mines	1.112	58	Murphy Oil	0.153	0.102	0.255

59	Jindal Steel & Power	1.033	59	Whiting Petroleum	0.198	0.039	0.237
60	Mitsui	0.998	60	Sasol	0.157	0.073	0.230
61	Banpu	0.950	61	Aker BP	0.224	0.000	0.224
62	Berau Coal Energy	0.942	62	California Resources	0.186	0.034	0.220
63	Wesfarmers	0.832	63	Crescent Point Energy	0.202	0.018	0.220
64	Up Energy Development	0.826	64	Rice Energy	0.000	0.218	0.218
65	Kangaroo Resources	0.794	65	Linn Energy	0.071	0.125	0.197
66	Shanxi Meijin Energy	0.784	66	Newfield Exploration	0.108	0.074	0.183
67	Mongolian Mining	0.767	67	MEG Energy	0.178	0.000	0.178
68	Jizhong Energy	0.742	68	Lundin	0.167	0.006	0.173
69	Allete	0.723	69	Mitsui	0.063	0.107	0.170
70	Aspire Mining	0.670	70	Birchcliff Energy	0.027	0.137	0.164
71	ArcelorMittal	0.640	71	Cimarex Energy	0.084	0.080	0.164
72	Hallador Energy	0.599	72	EP Energy	0.120	0.040	0.160
73	Vedanta	0.599	73	Maersk	0.153	0.000	0.153
74	LG International	0.595	74	Santos	0.016	0.133	0.149
75	Rhino Resource Partners	0.560	75	Oil India	0.096	0.049	0.145
76	Ramaco Resources	0.555	76	Ultra Petroleum	0.013	0.127	0.140
77	Lubelski Węgiel Bogdanka	0.554	77	Oil Search	0.022	0.117	0.140
78	CLP Holdings	0.552	78	SM Energy	0.075	0.061	0.135
79	Bayan Resources	0.529	79	ENGIE	0.033	0.096	0.130
80	Steel Authority of India	0.515	80	Painted Pony Petroleum	0.014	0.115	0.129
81	Vimetco	0.512	81	WPX Energy	0.088	0.040	0.128
82	Indo Tambangraya Megah (Banpu)	0.508	82	ARC Resources	0.045	0.083	0.128
83	Black Hills	0.495	83	JX Holdings	0.059	0.068	0.128
84	Monnet Ispat & Energy	0.492	84	Gulfport Energy	0.008	0.118	0.126
85	Kinetic Mines and Energy	0.463	85	Oasis Petroleum	0.100	0.022	0.123
86	Feishang Anthracite Resources	0.463	86	Polish Oil & Gas	0.031	0.091	0.122
87	FirstEnergy	0.463	87	PDC Energy	0.075	0.045	0.120
88	Sasol	0.456	88	Energen	0.100	0.019	0.119
89	Prairie Mining	0.428	89	Peyto E&D	0.009	0.110	0.119

90	Tata Power	0.424	90	MOL	0.072	0.047	0.119
91	American Energy	0.415	91	Oando	0.051	0.064	0.114
92	Coal Energy	0.414	92	Galp Energia	0.099	0.013	0.112
93	Agritrade Resources	0.414	93	Denbury Resources	0.105	0.002	0.107
94	Beijing Jingneng Thermal Power	0.411	94	National Fuel Gas	0.012	0.091	0.104
95	African Rainbow Minerals	0.400	95	Centrica	0.029	0.069	0.098
96	Huadian Power International	0.397	96	TAQA	0.051	0.046	0.097
97	Golden Eagle Energy	0.386	97	Premier Oil	0.077	0.020	0.097
98	JSW Energy	0.369	98	Great Eastern	0.000	0.094	0.094
99	Wollongong Coal	0.353	99	Japex	0.042	0.051	0.093
100	TBEA Co	0.329	100	DNO International	0.093	0.000	0.093

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