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INTEREST OF THE *AMICUS CURIAE*

The **City of Cambridge**, Massachusetts ("the City") has worked to address climate change locally, including by divesting from fossil fuels, but recognizes the need for strong and rapid federal action. The City has taken steps to reduce the vulnerability of its residents but will need to expend more resources on this effort if climate change continues unabated.

SUMMARY OF THE ARGUMENT

The continued release of greenhouse gases into the atmosphere will result in permanent changes to the Earth's climate. These changes will have many negative impacts on the welfare of the City and its residents, as well as on the Commonwealth of Massachusetts ("the Commonwealth") and the United States. Policy changes at the federal and international level could mitigate the worst of these impacts, but the fossil-fuel industry and related groups have prevented such political action by spreading disinformation about climate change and

pushing lawmakers to act contrary to the wishes of their constituents. The appropriate tool to combat the tactics of the fossil-fuel industry is divestment, because it demonstrates popular opinion and reduces the perceived legitimacy of the industry's information. Harvard University's participation in divestment is particularly important, partially because of its reputation, but also because its current position against divestment is being used as a political tool by groups opposed to climate-change mitigation.

ARGUMENT

I. THE EMISSION OF GREENHOUSE GASES CAUSES PERMANENT CHANGES IN THE EARTH'S CLIMATE

Rising average temperatures will lead to large changes in weather patterns and ecosystems

Climate change--the term used to describe the meteorological effects of global warming--is not a tidy phenomenon. As the concentration of "greenhouse gases" ("GHGs") in the atmosphere increases, the average global temperature will rise, but the subsequent effects are many and varied. Some of the

changes which are already observed or virtually certain to occur are described here.

1. Extremes in precipitation

Climate change is expected to increase both wet and dry precipitation extremes, causing a "wet-get-wetter . . . and dry-get-drier" scenario. Intergovernmental Panel on Climate Change, Climate Change 2013: The Physical Science Basis 984 (2013) [hereinafter The Physical Science Basis]. Increased average temperatures will increase the amount of precipitation that falls during the most extreme weather events. U.S. Global Change Research Program, Climate Change Impacts in the United States 769 (2014) [hereinafter Climate Change Impacts]. These effects will continue to grow, with the result that storms of an intensity seen only once every 20 years in the past could occur as often as once every 5 years by the end of the century. *Id.* at 71.

At the same time, droughts are likely to intensify, making events like California's multi-year water shortage more common. Diffenbaugh, Swain, and Touma, Anthropogenic warming has increased drought

risk in California, 112 Proceedings of the National Academy of Sciences 3931, 3934 (Mar. 2015). Drought requires a combination of low precipitation and high temperature. *Id.* at 3931. Thus, even where precipitation does not decrease, warmer temperatures will increase drought risk. *Id.*; Climate Change Impacts 38-41. At the same time, increased temperatures and a higher ratio of rain to snow will decrease snow accumulation in the mountains, the runoff from which ordinarily helps to lessen the drying effect of warm seasons.

2. Intensified hurricanes and storms

Hurricane formation in the North Atlantic is a complicated process and the impact of climate change is not fully understood. Climate Change Impacts 42. However, sea-surface temperature in the North Atlantic is strongly correlated with hurricane formation. National Oceanic and Atmospheric Administration, Global Warming and Hurricanes: A Review of Current Research Results, http://www.gfdl.noaa.gov/global-warming-and-hurricanes. Hurricane and tropical cyclone frequency is unlikely to increase with climate

change, but increased hurricane *intensity* is predicted in the North Atlantic, both in terms of the number of Category 4 and 5 hurricanes, Climate Change Impacts 42, and in terms of the precipitation falling in the average hurricane. The Physical Science Basis 993. The overall effect will be to increase the total damage caused by hurricanes in the North Atlantic in the long term.[1] In addition, other types of severe storms, such as strong thunderstorms or "pineapple express" rainstorms, may increase in frequency and magnitude. See generally Diffenbaugh, Scherer, and Trapp, Robust increases in severe thunderstorm environments in response to greenhouse forcing, 110 Proceedings of the National Academy of Sciences 16361 (2013); Michael Dettinger, Climate Change, Atmospheric Rivers, and Floods in California: A Multimodel

[1] A study incorporating a range of predictive models concluded found that the potential for damage would increase approximately 30%. Bender, Knutson, Tuleya, Sirutis, Vecchi, Garner, and Held, Modeled Impact of Anthropogenic Warming on the Frequency of Intense Atlantic Hurricanes, 327 Science 454, 458 (2010).

Analysis of Storm Frequency and Magnitude Changes, 47 J. American Water Resources Assn. 514 (2011).

3. Extreme heat

Perhaps the most obvious consequences of rising average global temperatures are more frequent and more severe heat waves. The Physical Science Basis 990. Record-breaking temperatures like the Texan heat wave of 2011 have become more likely as a result of climate change, Climate Change Impacts 38-39, and rising temperatures will continue to be felt everywhere, making "what now seems like an extremely hot day . . . commonplace." *Id.* at 39.

4. Sea-level rise

Climate change will cause sea levels to rise by melting glaciers and by causing seawater itself to expand. Intergovernmental Panel on Climate Change, Climate Change 2014: Impacts, Adaptation, and Vulnerability 367-368 (2014). The global average rise in sea level was 3.2 mm/yr between 1993 and 2010; this rate is expected to increase substantially, reaching as high as 16 mm/yr under some estimates. *Id.* at 191. Continued rising temperatures could lead to

catastrophic rises of 7 meters. *Id.* Even a slight rise in sea level can cause substantial beach erosion, threatening coastal development. See, e.g., Ranasinghe, Callaghan, and Stive, Estimating coastal recession due to sea level rise: Beyond the Bruun rule, 110 Climatic Change 561 (2012). Rising sea levels will also raise the high point of storm surges, which, combined with the increase in storm intensity, could lead to inundation of coastal areas or intrusion of seawater into freshwater supplies. Intergovernmental Panel on Climate Change, Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation 182-185 (2012).

5. Climate-zone shifts and species loss

Through these and other effects, climate change is redrawing the pattern of ecosystems on the globe, creating rapid shifts in local climates. See generally Burrows, Schoeman, Buckley, Moore, Poloczanska, Brander, Brown, Bruno, Duarte, Halpern, Holding, Kappel, Kissling, O'Connor, Pandolfi, Parmesan, Schwing, Sydeman, and Richardson, The Pace of Shifting Climate in Marine and Terrestrial

Ecosystems, 334 Science 652 (Nov. 2011). As the average temperature rises, the geographical area that experiences a given range of temperatures will shift along with it. *Id.* at 652. Similarly, the combination of increased temperatures and reduced precipitation in drought-prone areas is likely to exacerbate anthropogenic land degradation, desertification, and drought. M.S. Reed and L.C. Stringer, Climate change and desertification: Anticipating, assessing & adapting to future change in drylands 49 (2015). Changes to local and regional climates alter the geographical areas a given plant or animal species can inhabit. National Research Council, Advancing the Science of Climate Change 52 (2010) [hereinafter Advancing the Science]. If these changes occur too rapidly, or result in a complete elimination of a climate zone, the complete extinction of a species is possible. Sandel, Arge, Dalsgaard, Davies, Gaston, Sutherland, and Svenning, The Influence of Late Quaternary Climate-Change Velocity on Species Endemism, 334 Science 660 (Nov. 2011). In

addition, carbon dioxide also creates carbonic acid when absorbed by the ocean, which threatens many marine organisms and the species that rely on them for food. Climate Change Impacts 60.

Climate change is irreversible

The amount of GHGs emitted by human activities will eventually decrease, if not because of forward thinking and sound planning, then because the Earth's supply of coal, oil, and natural gas will give out. But the end of GHG emissions will not mean the end of climate change. Besides the irrevocable effects described above, once a molecule of a GHG is emitted it remains in the atmosphere until it is taken up again by a terrestrial or aquatic system, or it degrades through a process which can take hundreds of years. Advancing the Science 213.

In addition, the heat-trapping effect of GHG pollution does not occur immediately. The Earth system will continue to take in more energy from the sun than it re-emits, until it reaches equilibrium. Even if all human emissions were to cease immediately, global temperatures would still experience half a

degree (Fahrenheit) of warming. Climate Change Impacts 753.

II. THE IMPACTS OF CLIMATE CHANGE WILL REDUCE THE CAPACITY OF THE CITY'S GOVERNMENT, AS WELL AS THAT OF THE COMMONWEALTH AND THE UNITED STATES, TO ACHIEVE POLICY GOALS

The effects of climate change are already substantial, and will be enormous by the end of the century without significant reduction in greenhouse gas emissions. These effects will greatly decrease the capacity of federal, state, and local governments--including the City--to operate and to achieve policy goals.

The City and the Commonwealth are threatened with substantial harm as a result of climate change

The particular harm resulting to the Commonwealth from climate change, especially coastal erosion and sea-level rise, has been recognized by the U.S. Supreme Court. *Massachusetts* v. *E.P.A.*, 549 U.S. 497, 521-23 (2007). Both the local economy and residents' health will be negatively impacted by increases in flooding, heat waves, and precipitation; climate change also threatens iconic Massachusetts species.

Responding to climate change has long been a priority for the City of Cambridge. In 2002, the City published a "Climate Protection Plan" laying out strategies to reduce local GHG emissions, and in the intervening years has produced new research, reports, and policies aimed at mitigating the impact of climate change by limiting the City's own emissions. See City of Cambridge, Massachusetts, Climate Change Vulnerability Assessment, http://www.cambridgema.gov/CDD/Projects/Climate/climatechangeresilianceandadaptation.aspx (last visited Aug. 23, 2015) [hereinafter Cambridge Vulnerability Assessment]. Finding that at least some of the impacts of climate change are unavoidable, the City undertook a Climate Change Vulnerability Assessment to assess the risk. *Id.*

This assessment has uncovered substantial threats to the City and its residents, primarily from changes in precipitation and changes in average temperatures. For example, by 2070:

- Substantially greater flooding is expected during extreme precipitation events in East Cambridge and around Fresh Pond, R. Rossi, Presentation, City of Cambridge Climate Change Vulnerability Assessment 14-19 (Mar. 17, 2015);
- A "hundred-year storm"--that is, a storm of an intensity only seen once in a century under current conditions--will occur approximately once every 25 years, *id.* at 13;
- Millions of dollars in property damage is expected in the worst storms, with a total economic impact from flooding at almost $43 million per day, *id.* at 34-35
- Heat waves consisting of several days of 100-degree temperatures are predicted, making large areas of Cambridge hazardous to work or live in, *id.* at 21, 24;

In addition to harm that is expected to come from climate change, the City is already expending large sums of money on activities to make the city more resilient to the impacts of global warming. The City

has spent approximately $1 million on studies alone, and has set aside an additional $500,000 for development of a preparedness plan on climate change.

The Commonwealth as a whole is likewise threatened by climate change. The amount of rainfall predicted in the heaviest 1% of storms has already risen 71% in the Northeastern United States since 1958. Climate Change Impacts 9. This trend is likely to continue as atmospheric GHG concentration rises, and some models anticipate that the heaviest 5% of storms will be 3–4 times as intense at the end of this century than at the end of the last. *Id.* at 37.

Some of the Commonwealth's most iconic species are being threatened by climate change, including the piping plover and the Atlantic cod. As shorebirds, piping plovers rely on beach habitat for both food and shelter, nesting in shallow holes in the sand and feeding on invertebrates that live in the intertidal zone. This makes them uniquely vulnerable to sea-level rise, which can limit the amount of habitat available to plovers, a problem which is compounded by

the encroachment of human development in many beach areas. Seavey, Gilmer, and McGarigal, Effect of sea-level rise on piping plover (*Charadrius melodus*) breeding habitat, 144 Biological Conservation 393, 397-398 (2011).. In addition to the long-term problem of sea-level rise, large storm surges--which may become more common with rising global temperatures--could destroy large numbers of plover nests and devastate local populations. *Id.* at 398.

The Atlantic cod is likewise threatened by climate change. The cod population in the Gulf of Maine has plummeted in recent years, to about 3% of the size necessary to ensure a healthy fishery, resulting in a ban on cod fishing in 2014, which was further tightened for the 2015 season and extended to 2017.[2] Although the decline in cod populations has not

[2] The restrictions in 2014 amounted to an "effective ban." Abel, Gulf of Maine fishermen face 6-month cod ban, The Boston Globe (Nov. 10, 2014). These restrictions were continued in 2015: the 2015 acceptable biological catch ("ABC") for cod in the Gulf of Maine ("GOM") is 386 metric tons, a 75% reduction from the 2014 ABC. Magnuson-Stevens Fishery Conservation and Management Act Provisions; Fisheries of the Northeastern United States; Northeast

been conclusively linked to climate change, warming sea-surface temperatures are likely to further weaken cod populations by reducing the survival rate for cod larvae, particularly in relatively warm areas of the Atlantic like Georges Bank. See generally Kristiansen, Stock, Drinkwater, and Curchitser, Mechanistic insights into the effects of climate change on larval cod, 20 Global Change Biology 1559 (May 2014). Because the North Atlantic is predicted to experience a greater increase in sea-surface temperature than most other marine areas, continued warming temperatures will pose a barrier to restoring the species to viability. See Sumaila, Cheung, Lam, Pauly, and Herrick, Climate change impacts on the biophysics and economics of world fisheries, 1 Nature Climate Change 449, 451 (Dec. 2011) (discussing impact of sea-surface temperature in the North Atlantic).

Besides being an important element of the Commonwealth's history and culture, the Massachusetts

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Groundfish Fishery; Framework Adjustment 53, 80 F.R. 25110, 25112 (May 1, 2015).

fishery is a key contributor to the local economy. Commercial fishing in Massachusetts supported 107,000 jobs and was responsible for almost $8.5 billion in sales in 2012; recreational fishing provided almost 7,000 additional jobs. National Oceanic and Atmospheric Administration, Fisheries Economics of the United States 2012 at 50, 53 (2012). The fate of Atlantic cod over the last decade demonstrates the threat of overexploitation of natural resources combined with the impacts of climate change, but there are more direct impacts: fear of cod and other groundfish bycatch preventing recovery of the species has led to restrictions on the allowable catch of other commercial fisheries. *Id.* at 53.

A. Climate change will cause economic damage and loss of life throughout the nation

Beyond the impacts which are specific to the City and the Commonwealth, climate change poses a substantial threat to both the economic and the bodily health of all Americans.

The droughts in Texas and California, along with heat waves across the western United States,

demonstrate the dangerous health and economic impacts of climate change. Climate Change Impacts 38. Such droughts are expected to occur more often in the Southwest due to decreases in glacial melt, and as precipitation in the Southeast decreases, that region may begin to experience similar problems. *Id.* 75. The lack of precipitation will reduce groundwater recharge and prompt water users to withdraw more from groundwater, compounding the drought problems. *Id.* at 75-78, 86.

While precipitation decreases in some areas, it will increase drastically in others. The Northeast and Midwest have already seen increased precipitation leading to river flooding, which will likely increase as precipitation increases and changes from snow, which is often stored in high-elevation areas and returned during warm periods, to rain, which will immediately flow into the river system. *Id.* at 75. At the same time, sea-level rise, higher storm surges, and higher-precipitation storms are predicted to increase coastal flooding. *Id.* at 80. Besides

threatening human safety and health, these events will have a substantial impact on the national economy. Similar events have led to millions of dollars of losses in Washington, *id.* at 138, and billions in California's Central Valley. See R. Howitt, D. MacEwan, J. Medellin-Azuara, J. Lund, and D.A. Sumner, Preliminary Analysis: 2015 Drought Economic Impact Study (May 31, 2015). Individual Americans are expected to pay $26 billion more in increased energy costs as a result of higher temperatures. Climate Change Impacts 117.

Besides the direct harm predicted to the U.S. population, climate change also impedes the achievement of the declared policy goals of the federal government. The Endangered Species Act ("ESA") is the most obvious example. Congress's declared purpose for enacting the ESA was, among other goals, "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened

species." 16 U.S.C. § 1531(b) (2012). As discussed *supra*, climate change will shift the boundaries of habitable areas for many species, threatening animals and plants which cannot adapt quickly enough. Such changes in local climate will be particularly dangerous for endangered species: species may lose their critical habitat, encounter new diseases, or face human encroachment. J.B. Ruhl, Climate Change and the Endangered Species Act: Building Bridges to the No-Analog Future, 88 B.U. L. Rev. 1, 23-26 (2008). These factors will make it far more difficult for the federal government to meet its goal of protecting listed species and the ecosystems which feed and shelter them. *Id.*

Finally, climate change will likely have widespread negative implications for international security, the global economy, and the successful development of less industrialized countries through foreign-aid programs. Climate change serves as a "threat multiplier" or "accelerant of instability": a factor which exacerbates existing security problems.

See Department of Defense, 2014 Climate Change Adaptation Roadmap i (2014); Department of Defense, Quadrennial Defense Review Report 85 (2010). Climate change is also predicted to have a substantial negative impact on international development, hampering the U.S. government's goals of encouraging growth and stability in foreign countries. The sheer cost of adaptation will also be harmful to development globally, diverting as much as $100 billion per year in developing countries from other investments; these costs will increase still further the longer mitigation of GHG emissions is delayed. The World Bank Group, The Cost to Developing Countries of Adapting to Climate Change: New Methods and Estimates 1, 9 (2010).

The impacts of climate change are inequitably distributed

Finally, it is important to take into consideration the extreme injustice represented by these impacts. Climate change creates a "double

inequity":[3] a small number of industrialized countries are responsible for a substantial majority of historical GHG emissions,[4] while underdeveloped countries face higher risks from climate change and are less able to cope with these risks. See generally Füssel, How inequitable is the global distribution of responsibility, capability, and vulnerability to climate change, 20 Global Envtl. Change 597, 606-607 (Oct. 2010). Climate change is predicted to "slow down economic growth, make poverty reduction more difficult, . . . and prolong existing and create new poverty traps." Intergovernmental Panel on Climate

[3] This term was coined in D. Peters, V. Bakhshi, A. Bowen, C. Cameron, S. Catovsky, D. Crane, S. Cruickshank, S. Dietz, N. Edmondson, S. Garbett, L. Hamid, G. Hoffman, D. Ingram, B. Jones, N. Patmore, H. Radcliffe, R. Sathiyarajah, M. Stock, C. Taylor, T. Vernon, H. Wanjie, and D. Zenghelis, The Economics of Climate Change 29 (2006) [hereinafter Stern Review].

[4] This holds even when assuming no responsibility for emissions until after the 1990 start to the United Nations Framework Convention on Climate Change negotiations. B. Müller, N. Höhne, and C. Ellermann, Differentiating (Historic) Responsibilities for Climate Change: Summary Report 3 (2007) (industrialized countries responsible for 55% of emissions since 1990; least-developed countries for 4.1%).

Change, Climate Change 2014: Synthesis Report 16 (2014).

These inequities can also be seen within the United States. At the most basic level, policymakers in government and decisionmakers in the relevant corporate settings have far more access to resources than the average American,[5] meaning that those with the greatest responsibility are more likely to be able to avoid the worst effects. Conversely, people living in poverty are unlikely to be able to adapt to climate change. Evi, Mills, Smith, and Grambsch, Climate

[5] The median wealth of a U.S. Senator in 2013 was around $456,000, and the median wealth of a Representative was $338,000. Dennis and Hunter, Wealth of Congress Jumps $150 Million, http://blogs.rollcall.com/hill-blotter/wealth-of-congress-jumps-150-million-50-richest/ (last visited Aug. 22, 2015). In 2011, the median net worth of an American household was just under $69,000. U.S. Census Bureau, Median Value of Assets for Households, by Type of Asset Owned and Selected Characteristics: 2011 (2013). The average CEO compensation in 2013 was just over $8 million for the coal industry and about $5.8 million for the oil and gas industry, AFL-CIO, CEO Pay by Industry, http://www.aflcio.org/Corporate-Watch/Paywatch-2014/CEO-Pay-by-Industry (last visited Aug. 22, 2015), while the median household income in 2013 was about $52,000. C. DeNavas-Walt and B.D. Proctor, U.S. Census Bureau, Income and Poverty in the United States: 2013, at 7 (2014).

Change and Human Health Impacts in the United States: An Update on the Results of the U.S. National Assessment, 114 Envtl. Health Perspectives 1318, 1319-1320 (Sep. 2006). The elderly, young, sick, and poor are more vulnerable than the rest of the population to impacts like extreme heat and weather, air pollution, or the spread of diseases. Balbus and Malina, Identifying Vulnerable Subpopulations for Climate Change Health Effects in the United States, 51 J. Occupational and Envtl. Med. 33, 34-36 (2009).

III. INDUSTRY DISINFORMATION HINDERS CLIMATE-CHANGE SOLUTIONS

The solution to climate change is a unified, global response

The City has recognized the negative impacts of climate change that have occurred and will worsen, and has taken steps to do its part in mitigating climate change: most significantly, it has adopted a "Net Zero Action Plan" to reduce the GHG emissions from its buildings as far as possible and offset the remaining emissions with clean energy purchases. See Cambridge Community Development Department, Net Zero Action Plan, http://www.cambridgema.gov/CDD/Projects/Climate/netzer

otaskforce. But the City can only do so much on its own; efforts must be made at the federal and even international level to avoid devastating climate change.

The basic outline of the necessary response to climate change is clear: reduce GHG-emitting activity to the extent feasible, while developing the policies and technologies necessary to receive substantially similar benefits without risking further climate change. The tools required for this task are readily available, and the cost of implementing such policies, while substantial, is also economically justified, as the resultant reduction in risk far outweighs any immediate economic loss.[6]

The international system began such a response over two decades ago. The United Nations Framework Convention on Climate Change ("UNFCCC") was opened for signature in 1992, and the first legally binding

[6] At a cost of about 1% of global GDP each year, the international system could avoid damage equivalent to 5-20% of global GDP per year, "now and forever." The Stern Review vi.

emissions reductions, in the form of the Kyoto Protocol, were drafted in 1997. UNFCCC, Essential Background, http://unfccc.int/essential_background/items/6031.php (last visited Aug 16, 2015). These agreements serve to unify the global approach to mitigation and prevent free riding. Barret and Stavins, Increasing Participation and Compliance in International Climate Change Agreements, 3 Int'l Envtl. Agreements 349, 350 (2003).

Industry opposition stands in the way of implementing this solution

1. Resistance to climate action is and has been prompted by the fossil-fuel industry

Perhaps the biggest flaw of the Kyoto Protocol was that it failed to win the support of what was then the largest GHG emitter by far: the United States.[7] The Clinton Administration signed the Kyoto Protocol,

[7] The U.S. emitted GHGs equivalent to more than 1.5 gigatons of CO_2 in 1997. World Resources Institute, CAIT Climate Data Explorer, http://cait2.wri.org/historical, (enter 1997 under "Select Year(s)"; then click on arrow under "Total GHG Emissions Including Land-Use Change and Forestry - 1997") (last visited Aug 16, 2015).

but was met with a nearly unanimous Senate resolution opposing any treaty which would mandate commitments for developed, but not developing, countries or "would result in serious harm to the economy." S. Res. 98, 105th Cong. (1997) (passed 95-0). Eventually, the Bush administration announced that it would not ask the Senate to ratify the treaty, effectively withdrawing from the agreement. Anger at US climate retreat, BBC News (Mar. 29, 2001). This was only the first in a long line of setbacks for action on climate change.

Resistance to action on climate change was from the very beginning a product of industry interference. In April 1998, mere months after the Clinton Administration signed the Kyoto Protocol, the American Petroleum Institute circulated a memo decrying the fact that "[t]here has been little, if any, public resistance applied to Congress to reject the treaty" and vowing that "Victory will be achieved when [a]verage citizens 'understand' (recognize) uncertainties in climate science; recognition of

uncertainties becomes part of the 'conventional wisdom.'" Memorandum from Joseph Walker, American Petroleum Institute, to the Global Climate Science Team (Apr. 3, 1998), reprinted in 144 Cong. Rec. H2325, H2326 (daily ed. Apr. 27, 1998). Their "Strategies and Tactics" included "[d]evelop[ing] a global climate science information kit for media including peer-reviewed papers that undercut the 'conventional wisdom' on climate science" and publicizing "media-trained scientists." *Id.*

This initial plan--cultivating facially credible speakers in order to generate "uncertainties" in the American view of climate change--soon blossomed into a full-on campaign "manufactur[ing] uncertainty," termed "disinformation." Dunlap, Climate Change Skepticism and Denial: An Introduction, 57 American Behavioral Scientist 691, 692 (2013). Many industry organizations openly participated in the disinformation strategy. R.E. Dunlap and A.M. McCright, Organized Climate Change Denial, in The Oxford Handbook of Climate Change and Society 144, 148

(J.S. Dryzek, R.B. Norgaard, and D. Schlosberg, eds. 2011). Several also funded groups like the Global Climate Coalition--formed in 1989 to fight against adoption of the Kyoto Protocol and funded by various fossil-fuel and automotive companies--and the Information Council on the Environment--an organization formed by coal companies and utilities and dedicated to "reposition[ing] global warming as a theory (not fact)." *Id.* at 150; Brulle, Institutionalizing delay: Foundation funding and the creation of U.S. climate change counter-movement organizations, 122 Climatic Change 681, 690 (2014) [hereinafter Institutionalizing Delay]. After a public-relations campaign against industry funding of climate disinformation, the ExxonMobil Foundation, Koch Affiliated Foundations, and Scaife Affiliated Foundations drastically reduced their funding, though disinformation groups continue to be well-funded by anonymous donors. Institutionalizing Delay 690.

2. Industry claims are disinformation, not legitimate debate

Debate over the correct policy approach to take when mitigating climate change--or even a debate over whether the cost of mitigating climate change is worth the reduction in risk--could be a useful source of information for policymakers. Such policy disagreements should be expected as the science surrounding a newly discovered harm is settled and appropriate responses are assessed. But this argument has already been settled: substantial majorities of Americans believe that the United States should reduce its GHG emissions (even if other countries do not, and even if this has economic costs),[8] increase renewable-

[8] 62% of Americans believe that the U.S. should reduce GHG emissions regardless of international action, and the same number favor "medium-scale" or greater climate-change action, with 22% more favoring a "small-scale effort." Yale Project on Climate Change Communication and George Mason University Center for Climate Change Communication, Politics & Global Warming, Spring 2014 at 27-28 (2014). See also *id.* at 24 (66% of Americans "moderately" or "strongly" support "passing laws to increase energy efficiency and the use of renewable energy, as a way to reduce America's dependence on fossil fuels.").

energy and energy-efficiency subsidies,[9] and eliminate all subsidies to the fossil-fuel industry.[10]

But this is not a debate which can result in better policy, because some actors are actively producing incorrect information in order to prevent important policy steps from being taken. Enormous quantities of literature--in the form of op-eds, blog posts, policy briefs, and books published in popular presses--attempt to discredit the scientific findings of institutions like the Intergovernmental Panel on Climate Change ("IPCC"), though such literature does not typically undergo peer review, and some of those few "climate skeptics" published in peer-reviewed

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[9] 72% of Americans "[s]omewhat" or "[s]trongly support . . . [f]und[ing] more research into renewable energy sources"; 71% support "[p]rovid[ing] tax rebates for people who purchase energy-efficient vehicles or solar panels." Yale Project on Climate Change Communication and George Mason University Center for Climate Change Communication, Public Support for Climate and Energy Policies in November 2013 at 17 (2014). See also *id.* at 21(60% of Americans either "[m]oderately" or "strongly oppose . . . [e]liminat[ing] all federal subsidies for the renewable energy industry").

[10] 59% of Americans "[s]omewhat" or "[s]trongly support . . . [e]liminat[ing] all subsidies for the fossil-fuel industry." *Id.* at 17.

journals have been accused of ethical failures. Institutionalizing Delay 683-684; R.E. Dunlap and P.J. Jacques, Climate Change Denial Books and Conservative Think Tanks: Exploring the Connection, 57 American Behavioral Scientist 699, 712-713 (2013).

The primary source of disinformation on climate change are political organizations, Institutionalizing Delay 684, but these organizations receive their funding from foundations, many of which are themselves outlets for expenditures by the fossil-fuel industry.[11] This enables the industry to promote favorable policies through "financial steering." *Id.* at 689. There may be substantially greater industry support for these organizations than these data indicate, since money from donor-directed trusts which have no disclosure requirements has become extremely popular in recent years. *Id.* at 692. The two largest donor-directed trusts--Donors Trust and Donors Capital--are now the largest source of funding for organizations

[11] For example, the Koch Affiliated Foundations and the ExxonMobil Foundation. Institutionalizing Delay 687.

dedicated to opposing action on climate change, providing almost a quarter of those organizations' foundation funding. *Id.* at 690-691.

Industry lobbying has cut the vital link between the American people and Congress

Additional industry opposition to climate-change mitigation appears to be focused specifically on Congress--and to have achieved results. One example is the congressional hearing process during the negotiations of the Kyoto Protocol. A study of those invited to give testimony shows that, although scientists and administrators of federal agencies were more likely to be invited in the early and mid-1990s, industry figures and allies were more common after 1995 and dominated the expert mix by 1997. McCright and Dunlap, Defeating Kyoto: The conservative movement's impact on US climate change policy, 50 Social Problems 348, 363-364 (2003). Soon after that, the Senate passed the Byrd-Hagel Resolution, which effectively refused to ratify the Kyoto Protocol. See *supra*, Part III.B.1.

Industry efforts to oppose a climate bill surged again in the Obama Administration. When the American Clean Energy and Security Act (popularly known as "Waxman-Markey"), the only substantial legislative effort to reduce GHG emissions, went up for debate in 2009, H.R. 2454, 111th Cong. (2009), lobbying by the oil-and-gas industry spiked to a record high in 2009, Mulkern, Oil and Gas Interests Set Spending Record for Lobbying (Feb. 2, 2010), which has yet to be matched, Lobbying Spending Database: Oil & Gas, 2009, http://www.opensecrets.org/lobby/indusclient.php?id=E01&year=2009 (last visited Aug. 20, 2015).

A brief review of the history of climate-change politics shows that the connection between the public and the people that are ostensibly representing them has been weakened. In 1997, as hearings on the Kyoto Protocol became dominated by industry-supported skeptics and the Byrd-Hagel Resolution was signed, a majority of Americans said they supported joining an international set of standards on global warming, and would be willing to accept climate change-mitigation

policies even if they led to substantial increases in the price of fuel.[12] And while public opinion in 2009 strongly favored action to limit GHG emissions,[13] Waxman-Markey did not win enough support even to be taken up in the Senate. Hulse and Herszenhorn, Democrats Call Off Climate Bill Effort, The New York Times (July 22, 2015). No legislative work to establish a national climate response has since been undertaken, despite continued support for GHG

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[12] 60% of Americans in 1997 favored action to combat climate change even if it meant a 25-cent increase in gas prices; 55% supported the U.S. joining an international climate-change regime rather than setting its own emissions standards. Pew Research Center, Americans Support Action on Global Warming 11, 38 (Nov. 21, 1997). A 25-cent increase represented about a 20% hike in gas prices when the survey was taken. See U.S. Energy Information Administration, U.S. All Grades All Formulations Retail Gasoline Prices, http://www.eia.gov/dnav/pet/PET_PRI_GND_DCUS_NUS_M.htm (follow link in row "Gasoline - All Grades" and column "View History") (last visited Aug 23, 2015) (average price of gasoline in November was $1.216).

[13] In 2010 66% of Americans favored, and only 29% opposed, "[l]imits on carbon dioxide and other greenhouse gas emissions." Pew Research Center and National Journal Congressional Connection, June 10-13, 2010 Poll: Final Topline 3 (2010).

reduction.[14] The outsize influence of industry has also led to a crisis of confidence in the political system: 71% of Americans believe that "[l]arge campaign contributors" influence climate policy, and 67% that fossil-fuel companies do, while only 42% believe that they and others in their state may have an impact on changing the U.S. response to climate change. Yale Project on Climate Change Communication and George Mason University Center for Climate Change Communication, Politics & Global Warming, Spring 2014 at 22 (2014).

IV. DIVESTMENT IS THE APPROPRIATE TOOL TO RESIST INDUSTRY DISINFORMATION AND INTERFERENCE IN DEMOCRATIC POLITICS

The scattered nature of climate policy in the United States is the consequence of an active campaign

[14] See *supra* note 8. The Pew Research Center's polling indicates a similar level of support. See Pew Research Center, Americans, Politics and Science Issues 48 (July 1, 2015) (November 2014 survey found that 64% of U.S. adults favor, and 31% oppose, "setting stricter limits on power plants in order to address climate change"). The recent dominance of the Republican party in Congress cannot fully explain the lack of climate-change legislation, since even among Republicans more people support than oppose GHG reductions (50% v. 45%), and among non-Tea Party Republicans almost twice as many support as oppose such action (61% v. 33%). *Id.*

to inject disinformation into the climate-change debate and to prevent public support for climate-change action from translating into actual regulation of GHG emissions. The disconnect between the public and the legislature takes the climate-change debate out of the realm of political debate and into a moral and societal space, where action must be mediated by clear and substantive statements of outrage with these goals and these anti-democratic tactics. It is to make such a statement--not for political or economic impact--that the divestment movement exists.

Divestment is an effective strategy

It is generally accepted that the "direct impact" of fossil-fuel divestment--that is, the reduction in the share price of a fossil-fuel company as the immediate result of an institution's sale of its stock holdings or refusal to purchase debt--will be small. A. Ansar, B. Caldecott, and J. Tilbury, Stranded assets and the fossil fuel divestment campaign: What does divestment mean for the valuation of fossil fuel assets? 12 (2012) [hereinafter Stranded Assets]. This is not the impact sought by the divestment movement,

however: divestment is an attempt to end implicit support for harmful practices and to demonstrate the popular desire to minimize GHG emissions, thus counteracting the harmful misinformation presented by the fossil-fuel industry.

1. Divestment demonstrates the social disapproval of an industry's actions

One crucial means of demonstrating the illegitimacy of an industry is the association of its component companies with the negative impacts for which it is responsible. For the divestment movement, this means linking the declared pro-sustainability policies of institutions, like Harvard University, to a visible renunciation of the actions of large fossil-fuel corporations; in this case, the sale of related assets. Divestment is a uniquely strong signal in the context of climate change because it not only associates with immorality carbon-intensive energy generation.

This delegitimation has been theorized in organization studies as a process of "stigmatization." See generally Devers, Dewett, Mishina, and Belsito, A

General Theory of Organizational Stigma, 20 Organizational Science 154 (Jan.-Feb. 2009) [hereinafter Organizational Stigma]; Stranded Assets 36-38. Stigmatization proceeds in three stages: first, individuals label the industry as "fundamentally inconsistent with deeply institutionalized norms and values," Organizational Stigma at 160; second, the label is accepted by a "critical mass of stakeholder group members" and the industry is collectively identified as "the antithesis of everything the stakeholder group values," *id.* at 162; finally, because the industry is found to be incompatible with the norms of stakeholders, they will "cognitively disidentify" with the stigmatized group, "minimizing the quantity and quality of interaction . . . or severing ties completely," *id.* at 164-165. This stigmatization, if successful, can lead to "devastating adverse social and economic outcomes that can threaten survival," Stranded Assets at 38.

2. Divestment has been an important means of showing moral opposition on past issues

In the late 1970s and 1980s, institutions around the world divested from companies which were related to the apartheid regime in South Africa; divestment was widely recognized as an important mechanism for demonstrating the intensity and international nature of the opposition to the government's policies. A similar campaign against tobacco companies in the early 1990s led to widespread divestment, and most recently Harvard divested from companies connected to the Darfur crisis.

The current divestment movement has many parallels to the campaign to divest from the apartheid regime in South Africa--and the reasoning summoned in opposition to it is virtually identical. Like climate change today, "Apartheid was something that everybody was against. But the question was what to do about it." Wang, Against Apartheid, The Harvard Crimson (June 9, 2004), http://www.thecrimson.com/article/2004/6/9/against-apartheid-throughout-the-1970s-the/ (last visited Aug. 22, 2015). Students and faculty united to demand

divestment, but, in a letter that could just as easily have been penned by Harvard Pres. Drew Faust, then-President of Harvard Derek Bok criticized what he saw as "insist[ence] on arrogating to themselves the right to use economic leverage to influence the activities of others," and warned of "real threats of academic freedom, real financial losses and real administrative burdens" from divestment. Harvard is Warned on Activism, The New York Times (Mar. 12, 1979). But in time, the administration bent to meet the demands of the Harvard community: the University's Advisory Committee on Shareholder Responsibility voted to divest in 1984, and the Corporation eventually sold its stock in 15 companies on the ground that they "supplied substantial quantities of strategic goods to the South African police or military." D. Bok, The President's Report: 1989-1990 at 8 n.* (1991).

The next issue where divestment played an important part was the sale of tobacco products to the underaged and in countries where warning labels were not required. Rodman and Zhu, Calls for Divestment: A

Retrospective, The Harvard Crimson (May 27, 2015), http://www.thecrimson.com/article/2015/5/27/divest-retrospective-reunion-1990/ (last visited Aug. 22, 2015). Divestment from tobacco stocks is a particularly telling example because that industry, too, was involved in actively misleading policymakers and the public as to the harm they caused. Not only do climate-change misinformation campaigns use many of the same techniques as those employed by the tobacco industry, they employ the same people.[15]

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[15] This point is discussed at length in N. Oreskes and E.M. Conway, Merchangs of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming (2011). To take only one example, the Heartland Institute--famous most recently for its billboard equating Ted Kaczynski with the climate-change movement, see Heartland Pulls Billboard on Global Warming, The New York Times (May 4, 2012)--has been involved with Philip Morris since the 1990s, according to documents produced pursuant during litigation against the tobacco industry in the early 2000s. E.g., Memorandum from Thomas Borelli, Philip Morris Management Corp. to Jim Botticelli, Philip Morris Management Corp, http://industrydocuments.library.ucsf.edu/tobacco/docs/xybg0122 (last visited Aug. 21, 2015) (discussing role in a Heartland "book challeng[ing] the underlying science that supports many of today's environmental regulations . . . [to] be used by the Heartland Institute to educate and inform policy makers around the country"); Federal Excise Tax Status Report

Interestingly, the question of whether tobacco divestment would be an inappropriate use of the endowment never came up: with very little fanfare, and within a year of the first Harvard Crimson editorial calling for divestment, the Corporation simply sold off its tobacco holdings. *Id.* In doing so, Pres. Bok drew a line between "attempts to use the university to achieve political ends" and "the few situations in which the university chooses to sell its shares . . . simply because it does not wish to be associated with firms engaging in highly distasteful forms of activity or to be earning money through questionable types of business dealings." D. Bok, The President's Report: 1989-1990 at 7-8 (1991). Harvard now purchases no stock in any company "producing significant quantities of cigarettes or other tobacco products." Harvard

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Compilation, http://industrydocuments.library.ucsf.edu/tobacco/docs/rgnl0069 (last visited Aug. 21, 2015) (noting work with Heartland "to educate legislators and the public on alternatives to" a proposed increase in federal excise taxes).

Corporation Committee on Shareholder Responsibility, Harvard's Investment Policy with Regard to Tobacco 1.

Harvard's most recent ethics-driven divestment was in response to the Darfur genocide. After a student outcry, the Corporation announced its decision to divest from PetroChina, whose parent company, China National Petroleum Corporation, was involved in the Sudanese oil industry. Harvard announces decision to divest from PetroChina stock, Harvard Gazette Archives (Apr. 7, 2005). The following year, spurred by more widespread protest, Harvard expanded its divestment to Sinopec, another oil company with close ties to the China National Petroleum Corporation, which had planned to purchase an oil field in Sudan. Rucker, Student-Driven Sudan Divestment Campaign Grows, The New York Times (Apr. 26, 2006); Harvard Corporation Committee on Shareholder Responsibility, Statement on Sinopec divestment, Harvard Gazette Archives (Mar. 23, 2006). In 2007, the Oil and Natural Gas Corporation, a state-owned Indian company, was added to the list, and the Committee required that Harvard notify the

managers of funds in which it was invested of the University's divestment decisions. Strauss, Panel Releases Darfur Shares Report, The Harvard Crimson (June 29, 2007).

In each of these cases, the hardening of public opinion against the offending group led to substantial reforms, and divestment was a particularly important part of the process. This was particularly true in the divestment from South Africa; as the former South African President Frederik Willem de Klerk put it, "When the divestment movement began, I knew that apartheid had to end." Adele Simmons, Skeptics were wrong; South Africa divestment worked, The Chicago Tribune (Dec. 15, 2013). Similar results have been traced to the tobacco divestment campaign. See generally Wander and Malone, Fiscal versus social responsibility: How Philip Morris shaped the public funds divestment debate, 15 Tobacco Control 231 (June 2006).

Harvard's status as a thought leader makes its participation extremely important to the divestment

movement, because its repudiation of the fossil-fuel industry would demonstrate the intellectual and moral bankruptcy of continued resistance to climate-change action.[16] The support for divestment among Harvard students and faculty has garnered substantial attention on its own from national outlets, e.g., Walsh, The Next Frontier for Climate Activism: College Investments, TIME Magazine (Dec. 11, 2012); Gillis, To Fight Climate Change, College Students Take Aim at the Endowment Portfolio, The New York Times (Dec. 4, 2012), as well as from overseas media, e.g., Schmidt, Heirs of anti-apartheid movement rise up, Al Jazeera English (Dec. 15, 2013); Goldenberg, Harvard faculty members urge university to divest from fossil fuels, The Guardian (Apr. 10, 2014).

The University is at risk of being left behind, however. From the Rockefeller Foundation, Schwartz,

[16] In theoretical terms, "the higher the status of the claims maker(s), the greater the likelihood that a critical mass of stakeholder group members will accept the label and claims made about the offending organization and, thus, stigmatize the organization." Organizational Stigma 164.

Rockefellers--which began with funding from an oil baron--to the insurance giant AXA, to Norway's sovereign wealth fund, institutions around the world are withdrawing their support for fossil fuels. Divestment Commitments, Fossil Free, http://gofossilfree.org/commitments/ (last visited Aug. 22, 2015). A number of cities, including the City of Cambridge, have divested their own holdings in the fossil-fuel industry. Divestment Commitments, Fossil Free, http://gofossilfree.org/commitments/ (last visited Aug. 22, 2015). And other highly respected schools like Georgetown and Stanford have taken steps to divest, as well. Georgetown Divests from Direct Investments in Coal Companies, Georgetown University, http://www.georgetown.edu/news/sustainability-policy-regarding-investments.html (last visited Aug. 22, 2015); Stanford to divest from coal companies, Stanford Report (May 6, 2014).

Harvard's position on divestment harms City residents as well as the City's reputation as a center for academic excellence

As discussed *supra*, Harvard's failure to divest from the fossil-fuel industry is part of a larger problem that threatens the physical integrity of the City and the wellbeing of its residents. Coastal erosion and extreme precipitation events threaten flooding from the river and the sea, while increased temperatures will endanger the elderly and those unable to afford effective air conditioning. The City has developed a Net Zero Action Plan to reduce its own GHG emissions, Cambridge Community Development Department, *Net Zero Action Plan*, http://www.cambridgema.gov/CDD/Projects/Climate/netzerotaskforce, and taken steps to develop adaptation measures to protect its residents from climate-change impacts, Cambridge Vulnerability Assessment, but these actions are expensive and will have only a small impact if they are not supported by substantive political action on climate change.

The City of Cambridge and the institutions it hosts have a long history of leadership in ethics and

scholarship.[17] The intellectual character of the City is no less threatened by Harvard's actions than is the health of its residents. Scholarly pursuits, too, suffer from weather extremes. To take just one example, extreme weather caused three school cancellations at Harvard for the entire 20th century: for a hurricane in 1938, the Blizzard of 1978, and Hurricane Gloria in 1985. Levenson, After Years of Resisting, Harvard Now Can't Stop Having Snow Days, Boston.com (Feb. 10, 2015). But this century's Harvard students have already seen three weather cancellations: high snowfall led to cancelled classes

[17] Among other intellectual landmarks, Cambridge boasts the first college, school of public health in the country, and same-sex marriage in the country. See Historical Facts, Harvard University, http://www.harvard.edu/about-harvard/harvard-glance/history/historical-facts (last visited Aug. 21, 2015) (Harvard first college in American colonies); Eich, MIT Firsts, Spectrum, http://spectrum.mit.edu/articles/mit-firsts/ (last visited Aug. 21, 2015)(Harvard-MIT School for Health Officers first public-health school in country); First legal same-sex marriage performed in Massachusetts, History, http://www.history.com/this-day-in-history/first-legal-same-sex-marriage-performed-in-massachusetts (last visited Aug. 21, 2015) (first same-sex marriage in country performed at Cambridge City Hall).

in 2011, Sandy shut down the school in 2012, and this past winter's "Snowpocalypse" forced Harvard to cancel two days of classes. *Id.*

Besides the direct physical threat to the City, the toxic politics of climate change in the U.S. endanger efforts to find a solution. Cambridge has played an important part in climate-change research since the first comprehensive assessment of carbon dioxide's impact, chaired by Massachusetts Institute of Technology Professor Jule Charney. National Academy of Sciences, Carbon Dioxide and Climate: A Scientific Assessment at v (1979). The controversy surrounding Dr. Wei-Hock Soon is one example of the scholarly community in Cambridge becoming compromised by political and industry influence. See *infra*, Part IV.C. Another is the effort by Republicans in Congress to defund scientific research into climate change, endangering ongoing research at Cambridge and elsewhere; under a recent budget proposal, virtually the only cuts to science funding went to the climate-change research: the National Science Foundation's

geosciences program, the National Aeronautics and Space Administration's earth sciences program, and the National Oceanic and Atmospheric Administration's climate research. Hourihan, NASA, NSF Continue R&D Budget Recovery in House, But Climate Research Cut, American Association for the Advancement of Science (May 9, 2014), http://www.aaas.org/news/nasa-nsf-continue-rd-budget-recovery-house-climate-research-cut (last visited Sep. 6, 2015).

The University's position against divestment supports the anti-democratic activity of the fossil-fuel industry

Harvard University bears some of the responsibility for the success of fossil-fuel companies' strategy. Fundamentally, continuing to fund fossil-fuel companies as if they were just another investment supports the case against climate-change action by implying that there is no reason to consider the fossil-fuel industry as particularly harmful.

Groups opposed to action on climate change have also taken advantage of Harvard's position in more direct ways. The foremost example is Dr. Wei-Hock

Soon, a researcher at the Harvard-Smithsonian Center for Astrophysics ("CFA") whose practices and consistent failure to disclose funding from interested organizations have led to a series of controversies. Despite the CFA's efforts to "routinely distance[] itself from Dr. Soon's findings," and his complete lack of training in astrophysics, the researcher is regularly billed as a "Harvard astrophysicist." Gillis and Schwartz, Deeper Ties to Corporate Cash for Doubtful Climate Researcher, The New York Times (Feb. 21, 2015).[18] Although Dr. Soon has received no formal

[18] A number of well read online sources make similar claims. E.g., NYT Smears Scientist Willie Soon for Telling the Truth About "Global Warming," Breitbart (Feb. 21, 2015), http://www.breitbart.com/big-government/2015/02/21/nyt-smears-scientist-willie-soon-for-telling-the-truth-about-global-warming/ (last visited Aug 21, 2015) (referring to Dr. Soon as a "Harvard-Smithsonian astrophysicist"); Global Warming Believers Launch Attack Campaign Against Renowned Scientist, The Daily Caller (Feb. 22, 2015), http://dailycaller.com/2015/02/22/global-warming-believers-launch-attack-campaign-against-renown-scientist/ (last visited Aug 21, 2015) (referring to Dr. Soon as a "Harvard astrophysicist"). At least one Harvard professor has objected to Dr. Soon's use of the Harvard name to "communicate[] that [his research] was a certified Harvard piece of work." Bernhard, and Zhang, Allegations Against Smithsonian Researcher

training in climatology, he published and gave Congressional testimony on a study claiming that "the 20th century is likely *not* the warmest nor a uniquely extreme climatic period of the last millennium."[19] Climate History and the Science Underlying Fate, Transport, and Health Effects of Mercury Emissions: Hearing Before the S. Comm. on Envt. and Public Works, 108th Cong. 161 (2003) (testimony of Willie Soon, astrophysicist, CFA). And although the article was written independently of Dr. Soon's work for the CFA, *id.* at 170, Sen. James Inhofe consistently referred to it as "the Harvard-Smithsonian Center's work," and others made similar statements. *Id.* at 2 (opening statement of Sen. Inhofe); *id.* at 5 (opening statement of Sen. Voinovich). Similarly, in response to the latest critique of Dr. Soon's disclosure practices,

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Bring Attention to Harvard (Feb. 25, 2015) (quoting Michael B. McElroy).

[19] This paper led to the resignation of three members of the editorial board of the journal in which it was published, and a statement from the journal's publisher admitting that some of the article's claims "cannot be concluded convincingly from the evidence provided." Kinne, An article unleashed worldwide storms, 24 Climate Research 197, 198 (2003).

the Heartland Institute declared that the "Harvard-Smithsonian is publicly defending Soon." Debunking the Left's Attack on an Innocent Climate Scientist, The Heartland Institute, https://www.heartland.org/willie-soon (last visited Sep. 6, 2015). This was untrue,[20] but so long as Harvard refuses to take substantive action demonstrating that it supports action to mitigate climate change, its reputation can be leveraged as PR for the energy industry.

Although Dr. Soon's approach may have garnered the most headlines, the ambivalence of intellectual leaders like Pres. Faust is also used to shore up controversial positions. DivestmentFacts.com, a website run by the Independent Petroleum Association of America, curates a collection of quotes from institutional governing bodies intended to demonstrate opposition to divestment. What They're Saying

[20] The CFA merely defended "the process by which the research results of all of its scholars are peer reviewed." Goldenberg, Work of prominent climate change denier was funded by energy industry, The Guardian (Feb. 21, 2015).

Archives, Divestmentfacts.com, http://divestmentfacts.com/category/what-theyre-saying/ (last visited Aug. 16, 2015). Pres. Faust's letter not only tops the list of demonstrative statements against the anti-fossil fuel campaign, but is also the fourth-most "Popular Resource[]" on the website. *Id.* Sections of Pres. Faust's letter also appear in the American Energy Alliance's primer on divestment, immediately after the declaration that "the more natural gas, coal, and oil the world uses, the safer we become," What is the Fossil Fuel Divestment Movement?, American Energy Alliance (Feb. 5, 2015), http://americanenergyalliance.org/2015/02/05/fossil-fuel-divestment-movement/ (last visited Aug. 21, 2015), and as "a resounding defense of the university's academic essence" in a recent report titled *Sustainability: Higher Education's New Fundamentalism*. R. Peterson and P. Wood, Sustainability: Higher Education's New Fundamentalism (Mar. 2015). More straightforwardly, one business

editorial, arguing that there is no moral obligation to cease development of fossil-fuel infrastructure, concluded its case with a block quote from Pres. Faust's letter and a simple "Amen." Editorial, Money, carbon and morality, Greater Baton Rouge Business Report (June 24, 2014).

These associations are unfair to Pres. Faust, twisting her words and employing purposeful ambiguity to make her appear supportive of the institutions' broader claims. But this is precisely the problem: a neutral position can be as strong of a statement as affirmative opposition when it comes from the representative of a respected institution.

Arguments against divestment are misguided

The evidence of this Part and Part III, *supra*, demonstrate that the arguments raised by Pres. Faust in her letter are misguided: anyone who "belie[ves] in the importance of addressing climate change," Faust, Fossil Fuel Divestment Statement (Oct. 3, 2013), http://www.harvard.edu/president/news/2013/fossil-fuel-divestment-statement (last visited Aug. 22, 2015), should also understand the need for divestment.

When used to protect funding for climate-change research, the endowment serves at least as academic a purpose as when it is used to fund a student organization's pizza party. Divesting the endowment from the fossil-fuel industry is not a political move, but a declaration of moral beliefs, and it makes far better use of the University's reputation than do the myriad blogs and websites using Pres. Faust's letter to promote climate-change disinformation.

While it is likely true that institutional divestment could not cause immediate and substantial reductions in the market capitalization of fossil-fuel companies, this is not the goal; the purpose of divestment is rather to demonstrate the illegitimacy of the fossil-fuel industry. In this regard it will be more effective than the research which Pres. Faust recommends in its place, because while research is long-term and uncertain, divestment will have the immediate and certain impact of repudiating industry tactics and restoring the connection between popular opinion and Congress.

CONCLUSION

By enabling industry opposition to climate-change mitigation, Harvard University's ongoing investment activities harm the interests of the City of Cambridge, as well as the interests of the Commonwealth of Massachusetts and the United States. We therefore urge the Court to recognize the tortious nature of Harvard's investment decisions and to allow Plaintiffs standing to challenge them in court.

APPENDIX 1: 16 U.S.C. § 1531

§ 1531. Congressional findings and declaration of purposes and policy

(a) Findings

The Congress finds and declares that—

(1) various species of fish, wildlife, and plants in the United States have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation;

(2) other species of fish, wildlife, and plants have been so depleted in numbers that they are in danger of or threatened with extinction;

(3) these species of fish, wildlife, and plants are of esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people;

(4) the United States has pledged itself as a sovereign state in the international community to conserve to the extent practicable the various species of fish or wildlife and plants facing extinction, pursuant to—

(A) migratory bird treaties with Canada and Mexico;

(B) the Migratory and Endangered Bird Treaty with Japan;

(C) the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere;

(D) the International Convention for the Northwest Atlantic Fisheries;

(E) the International Convention for the High Seas Fisheries of the North Pacific Ocean;

(F) the Convention on International Trade in Endangered Species of Wild Fauna and Flora; and

(G) other international agreements; and

(5) encouraging the States and other interested parties, through Federal financial assistance and a system of incentives, to develop and maintain conservation programs which meet national and international standards is a key to meeting the Nation's international commitments and to better safeguarding, for the benefit of all citizens, the Nation's heritage in fish, wildlife, and plants.

(b) Purposes

The purposes of this chapter are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section.

(c) Policy

(1) It is further declared to be the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this chapter.

(2) It is further declared to be the policy of Congress that Federal agencies shall cooperate with State and local agencies to resolve water resource issues in concert with conservation of endangered species.

(Pub. L. 93–205, §2, Dec. 28, 1973, 87 Stat. 884; Pub. L. 96–159, §1, Dec. 28, 1979, 93 Stat. 1225; Pub. L. 97–304, §9(a), Oct. 13, 1982, 96 Stat. 1426; Pub. L. 100–478, title I, §1013(a), Oct. 7, 1988, 102 Stat. 2315.)

REFERENCES IN TEXT

This chapter, referred to in subsecs. (b) and (c)(1), was in the original "this Act", meaning Pub. L. 93–205, Dec. 28, 1973, 81 Stat. 884, known as the Endangered Species Act of 1973, which is classified principally to this chapter. For complete classification of this Act to the Code, see Short Title note set out below and Tables.

AMENDMENTS

1988—Subsec. (a)(4)(G). Pub. L. 100–478 substituted "; and" for period at end.

1982—Subsec. (c). Pub. L. 97–304 designated existing provisions as par. (1) and added par. (2).

1979—Subsec. (a)(5). Pub. L. 96–159 substituted "wildlife, and plants" for "wildlife".

EFFECTIVE DATE

Pub. L. 93–205, §16, Dec. 28, 1973, 87 Stat. 903, provided that: "This Act [enacting this chapter, amending sections 460k–1, 460*l*–9, 668dd, 715i, 715s, 1362, 1371, 1372, and 1402 of this title and section 136 of Title 7, Agriculture, repealing sections 668aa to 668cc–6 of this title, and enacting provisions set out as notes under this section] shall take effect on the date of its enactment [Dec. 28, 1973]."

SHORT TITLE OF 1982 AMENDMENT

Pub. L. 97–304, §1, Oct. 13, 1982, 96 Stat. 1411, provided: "That this Act [amending this section and sections 1532, 1533, 1535, 1536, 1537a, 1538, 1539, 1540, and 1542 of this title and enacting provisions set out as notes under sections 1533, 1537a, and 1539 of this title] may be cited as the 'Endangered Species Act Amendments of 1982'."

SHORT TITLE OF 1978 AMENDMENT

Pub. L. 95–632, §1, Nov. 10, 1978, 92 Stat. 3751, provided: "That this Act [amending sections 1532 to 1536, 1538 to 1540, and 1542 of this title] may be cited as the 'Endangered Species Act Amendments of 1978'."

SHORT TITLE

Pub. L. 93–205, §1, Dec. 28, 1973, 87 Stat. 884, provided: "That this Act [enacting this chapter, amending sections 460k–1, 460*l*–9, 668dd, 715i, 715s, 1362, 1371, 1372, and 1402 of this title and section 136 of Title 7, Agriculture, repealing sections 668aa to 668cc–6 of this title, and enacting provisions set out as notes under this section] may be cited as the 'Endangered Species Act of 1973'."

RELATIONSHIP TO ENDANGERED SPECIES ACT OF 1973

Pub. L. 102–251, title III, §305, Mar. 9, 1992, 106 Stat. 66, as amended by Pub. L. 104–208, div. A, title I, §101(a)