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Charitable Trusts and Organizations Section
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Harrisburg, PA 17120

Division of Charities Investigation Unit/Audits
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October 30, 2023

Dear Attorney General Henry:

On behalf of Penn State Eco-Action—and the undersigned alumni, faculty, and Penn State community member supporters—we write today to share concerns about Penn State's Board of Trustees and Penn State Investment Council's violations of the Pennsylvania Prudent Investor Rule. Through the continued decision to invest the endowment in fossil fuel companies, these bodies breach their fiduciary duties.

Under Pennsylvania law, the Board and Council must perform duties specific to non-profit fiduciaries. They must fulfill a duty of care, or "perform their duties . . . using the same degree of care, skill, caution and diligence that a person of ordinary prudence would use under similar circumstances." They must also fulfill a duty of loyalty, or "perform their duties in good faith with the best interests of the organization in mind." And they must not "impair the charitable purpose" of the trust in their investment decisions.

Penn State's status as Pennsylvania's flagship land-grant institution carries with it a unique institutional purpose: service to the Commonwealth. The Pennsylvania General Assembly recognizes this duty and each year reaffirms it by awarding Penn State hundreds of millions of dollars in state appropriations. By investing an estimated $310.5 million in the fossil fuel industry, the Board and Council impair the charitable purpose of the trust. Article I, Section 27 of the Commonwealth's constitution recognizes Pennsylvanians' "right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment"—a right that man-made climate change, caused mainly by fossil fuel usage, renders meaningless.

In its strategic plan, Penn State draws a connection between the institution's obligations and the growing environmental crisis: "With service to the citizens of the Commonwealth as an institutional obligation, we embrace the challenge of environmental stewardship articulated in our Constitution." Further, Penn State recognizes climate change's already-present impact on Pennsylvania. As a University-sanctioned Task Force recently expressed: "[Climate change] is affecting our local Pennsylvania (PA) communities ***now*** . . . it is going to fundamentally harm the future of our current Penn State students, if we don't act ***now***." In sum, the University sees climate action as part of its institutional responsibilities.

However, through continuously owning fossil fuel assets, the Board and Council provide capital to the fossil fuel industry. This industry, in turn, drives global warming. And this warming harms Pennsylvania communities by increasing the frequency and power of natural disasters, destabilizing the agriculture and tourism industries, and creating new health risks for Pennsylvanians—all which will economically strain the Commonwealth. The Board and Council could, like more than 1,500 institutional investors representing more than $40 trillion in assets, divest from fossil fuels. But the Board has failed to require the Council to make substantive policy shifts. And the Council has not used their discretion to change investment practices.

This decision impairs not only the trust's charitable purpose, but also the Board and Council's duties of care and loyalty. Fossil fuel assets carry clear and specific risks. Prudent investors must consider, for instance, how a growing tide of litigation will affect the fossil fuel industry's financial future. Investors must consider how increasingly cost-competitive alternative technologies, increased government regulation, and the fossil fuel industry's misconduct threaten these assets' returns. They must evaluate how climate degradation will harm the physical integrity of Penn State's campuses. And, they must—as they did when making their decision to divest from companies doing business in South Africa—consider how holding these assets hampers Penn State's capacity to attract students, faculty, and staff.

The Council's continued investments in the fossil fuel industry are incompatible with the care and prudence required from a fiduciary body. And neither the Council nor the Board have publicly acknowledged concerns about these risks—which, combined with the lack of transparency in decision-making by these groups, gives us no reason to believe they have adequately considered such risks.

We love Penn State and believe in our University's role in serving the Commonwealth. Since 2014, we repeatedly raised these concerns to Penn State's Board of Trustees and the Penn State Investment Council. But they have not responded to our pleas. Now, we feel compelled to turn to you to ask you to carry out your Office's role to protect the public interest in all property committed to charitable purposes.

Sincerely,

ECO ACTION

Penn State EcoAction and the undersigned members of our University community

Students and Alumni
Erin Brown '21, *Founder, Penn State Gender Equity Coalition*
Rainier Foley-DeFiore '21, *Student Advocate*
Divya Jain '21, *Former Eco-Action President & Co-Director of Penn State Climate Action*
Anne Lai '23, *Summer 2023 College of Arts & Architecture Marshal*
Abbie La Porta '24, *Founder, State College Sunrise*

Amanda Liebhart ‘21, *Former President of EcoReps*
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Noelle Musolino ‘21, *Former Penn State Schreyer Student Council President*
Josh Portney ‘23, *Candidate for State College Borough Council*
Taran Samarth ‘23, *Research and Policy Lead, Penn State Forward*
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Hester Blum, *Associate Professor of English*
Rosa A. Eberly ‘84 ‘94, *Director, Intercollege Minor in Civic and Community Engagement*
Kristy Ganoe, *Assistant Teaching Professor of English*
Shannon Goff, *Associate Professor of Art*
Erin Heidt-Forsythe, *Associate Professor of Political Science and Women's Studies and Associate Director of the Rock Ethics Institute*
Ann Holt, *Assistant Professor of Art Education*
Ben Jones, *Assistant Professor of Ethics and Public Policy*
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Christopher Staley, *Distinguished Professor of Art (Emeritus)*
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Affiliations do not indicate endorsements.

Prepared with assistance from attorneys at Climate Defense Project.

cc:

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SUPPORTING DOCUMENTATION

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I. Pennsylvania law imposes duties on the Penn State Board of Trustees and Investment Council in their management of the endowment.

- Penn State's Board of Trustees delegates authority to the Penn State Investment Council.[1] Both bodies delegate authority to the Office of Investment Management, which oversees the day-to-day management and administration of the investment funds.[2]
- Penn State holds an estimated $310.5 million in fossil fuel assets.
  - In May 2021, Joe Cullen, Penn State's chief investment officer, stated that "the University's current fossil fuel holdings are . . . around 5% [of the investing portfolio]."[3]
  - That June, Penn State's endowment was valued at "approximately $6.21 billion."[4]
  - Penn State has not publicly confirmed the explicit value of its holdings in fossil fuel companies since 2021; however, the share of Penn State's endowment invested in "real assets" including natural resources has increased from 7.3% in June 2021 to 12.6% in December 2022.[5]
- Under Pennsylvania law, these bodies must consider the *charitable purposes* of the trust: "A fiduciary shall invest and manage property held in a trust as a prudent investor would, by considering the purposes, terms and other circumstances of the trust and by pursuing an overall investment strategy reasonably suited to the trust."[6] In addition, "a fiduciary shall consider . . . the special relationship of the asset . . . on the community in which the beneficiary of the trust is located and the special value of the integration of the beneficiary's activities with the community where that asset is located."[7] The Attorney General has the power to seek judicial review if she concludes that the charitable purpose of the trust is being impaired.[8]
- ***The Board and Council have failed to consider the charitable purposes of the trust*** by providing capital to the fossil fuel industry, which in turn drives global climate warming and harms both Penn State and Pennsylvania communities.
- The Attorney General is also responsible for ensuring the fiduciaries of charitable trusts have acted properly and efficiently. Fiduciaries of charitable trusts must adhere to the *duty of loyalty*, or "perform[ing] their duties in good faith with the best interests of the organization in mind."[9]
- ***The Board and Council have violated their duty of loyalty*** by funding an industry that has and will continue to harm Penn State's reputation and poses a physical threat to Penn

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[1] *See, e.g.*, Amendment and Restatement of the University's Long-Term Investment Pool ("LTIP") Spending Policy and the Investment Policies for LTIP and Non-Endowed Funds ("NEF"), Penn State Board of Trustees (Feb. 20 2023) (amending and restating investment policies)
[2] Office of Investment Management, Penn State (last accessed Oct. 9, 2023).
[3] University partners with students to further educate community on sustainability, Pennsylvania State University (May 27, 2021).
[4] Long-Term Investment Pool (LTIP Review), Penn State Office of Investment Management (June 30, 2021).
[5] *Id.*; The Pennsylvania State University Long Term Investment Pool Investment Policy Statement at 11, Penn State University (2023); Long-Term Investment Pool (LTIP Review), Penn State Office of Investment Management (December 31, 2022).
[6] 20 Pa. C.S. § 7203.
[7] *Id.*
[8] *Id.*
[9] Handbook for Charitable Nonprofit Organizations, Commonwealth of Pennsylvania Office of Attorney General (Jan. 2018). *See also* 15 Pa. C.S. § 5712(a).

State property. Members of the Penn State Board of Trustees have also violated their duty of loyalty by maintaining financial or professional ties to the fossil fuel industry that are in conflict with their duties as trustees.

- Fiduciaries of charitable trusts must also adhere to a *duty of care*: "perform[ing] duties . . . using the same degree of care, skill, caution and diligence that a person of ordinary prudence would use under similar circumstances."[10]
- ***The Board and Council have violated their duty of care*** by investing the University's endowment in financially risky and volatile fossil fuel stocks, which have underperformed the broader market for a ten-year period and face a decidedly negative long-term outlook. This violation is made more obvious by the failure to follow the lead of peer institutions who have recognized the prudence of divestment.
  - Fossil fuel investments violate the fiduciary duties of inquiry, monitoring, loyalty, diversification, impartiality, and acting with reasonable care. "The cleanest and simplest way to avoid climate vulnerability in a portfolio is to divest or, at minimum, dramatically reduce exposure to fossil fuel and other highly climate-vulnerable holdings."[11]
  - According to former Securities and Exchange commissioner Bevis Longstreth, whose scholarship on non-profit investment helped inform the drafting of the original UPMIFA: "The prudence standard of [UPMIFA, the Prudent Investor Act's counterpart in other states,] can easily support a decision not to continue to hold or invest in fossil fuel companies . . . A decision to linger in an investment with such an overhanging risk, and expect to time one's exit before the danger is recognized in the market, is a strategy hard to fit within the concept of prudence."[12]
  - As the Center for International Environmental Law has written, "[c]limate change should be considered an independent risk variable when making investment decisions, and it will trigger the obligations of pension fund fiduciaries . . . If pension fund fiduciaries do not take the financial risks posed by climate change seriously, they may be subject to liability."[13]

II. The Board and Investment Council have failed to uphold Penn State's charitable purpose: service to the Commonwealth.

Climate change interferes with Pennsylvanians' constitutional rights, injures public health, and damages Pennsylvania's economy and infrastructure. Institutional divestment is a necessary part of the concerted, aggressive action to mitigate climate change that scientists tell us will be required.

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[10] 15 Pa. C.S. § 5712(a).
[11] Trillion Dollar Transformation, Center for International Environmental Law at 5-7, 12-17, 19 (Dec. 2016).
[12] Bevis Longstreth, Outline of Possible Interpretative Release by States' Attorneys General Under The Uniform Prudent Management of Institutional Funds Act (Jan. 26, 2016).
[13] Trillion Dollar Transformation, Center for International Environmental Law at 1-2 (Dec. 2016).

- Penn State is Pennsylvania's flagship public university and sole land-grant institution.[14] From its founding, Penn State was considered an "instrumentality of the state."[15] As a land-grant institution, service to the Commonwealth is an institutional obligation.[16]
- In turn, the Commonwealth recognizes that State-related universities, including Penn State, "serve the public purposes of this Commonwealth."[17]
- To this end, the Commonwealth awards Penn State annual appropriations, which have totaled $338,960,000 in recent years.[18] According to former Penn State President Eric J. Barron, these annual appropriations are "an irreplaceable keystone of our land-grant model, and [have] tremendous value for Penn State, the citizens of Pennsylvania, and the [C]ommonwealth itself."[19]
- The Constitution of the Commonwealth of Pennsylvania recognizes Pennsylvanian's "right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment."[20] The Constitution further commits the Commonwealth to "conserv[ing] and maintain[ing] [Pennsylvania's natural environment] for the benefit of all the people."[21]
- Climate change threatens Pennsylvania's environment and economy and increases Pennsylvanians' health risks.[22]
- According to Pennsylvania's Department of Environment Protection, specific climate change effects in Pennsylvania will include: flooding; extreme precipitation; hazardous heat conditions; reduced air quality; heat waves; augmented runoff, erosion, and nutrient leaching; decreased crop yields; adverse impacts on the recreation/tourism sector; and disruptions in ecosystems and wildlife populations.[23]
- Following fatal flash floods in Bucks County and a summer of poor air quality caused by Canadian wildfires, the Center for Climate Integrity, Resilient Analytics, and Scioto Analysis found that climate change adaptations will cost municipalities and taxpayers more than $15 billion by 2040.[24] As an illustrative example, PennDOT's record breaking impacts from floods and landslides cost over $125.7 million extra for infrastructure replacement in 2018 alone.[25]
- Penn State recognizes that "climate change poses an existential threat to humans' and that "now is the time to act." In 2022, a University-sanctioned Task Force wrote that: "[W]e recognize that climate change is one of the most complex and urgent issues of our time. It is affecting our local Pennsylvania (PA) communities ***now***."[26]

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[14] State funding an 'irreplaceable keystone' of Penn State's land-grant mission, Penn State News (Dec. 7, 2021).
[15] Mission and Values, Penn State (2023).
[16] Strategic Plan: Mission, Penn State (2022).
[17] 10 P.S. § 374(a).
[18] State funding an 'irreplaceable keystone' of Penn State's land-grant mission, Penn State News (Dec. 7, 2021).
[19] *Id.*
[20] PA. Const. art. I, §27.
[21] *Id.*
[22] *See generally* 2021 Pennsylvania Climate Impacts Assessment, Pennsylvania Department of Environment (May 2021).
[23] *Id.* at 39–51.
[24] Cassie Miller, Report outlines the costs of climate change on Pa. communities, taxpayers, Pennsylvania Capital Star (July 26, 2023).
[25] Climate Change in Pennsylvania, Pennsylvania Department of Environmental Protection (last accessed Oct. 9, 2023).
[26] For the Future: A Report from the President's Carbon Emissions Task Force at 3, Penn State (Dec. 2021).

- In its strategic plan, Penn State welcomes the connection between the institution's obligations and climate action: "With service to the citizens of the Commonwealth as an institutional obligation, we embrace the challenge of environmental stewardship articulated in our Constitution."[27]
- A near-linear relationship exists between the cumulative amount of carbon dioxide emitted and the amount of global warming it causes.[28] Global warming will exceed two degrees Celsius by the century's end unless drastic reductions in carbon dioxide and other greenhouse gas emissions occur in the coming decades.[29] To limit warming, cumulative carbon dioxide emissions must reach net zero, along with strong reductions in other greenhouse gasses.[30]
- Concerted, aggressive campaigns to reduce greenhouse gas emissions will lessen the scope of global warming, and its related infrastructure disruptions, public health risks, and economic impact. Every one-half degree Celsius of global warming results in discernible increases in intensity and frequency of temperature extremes, heavy precipitation, and agricultural, hydrological and ecological droughts in some regions.[31]
- According to former Governor Tom Wolf, we must take proactive approaches to climate change and significantly lower greenhouse gas emissions to prevent worsening impacts and protect Pennsylvanians' health and safety, economy, infrastructure, farms, businesses, recreation, and environmental resources.[32]
- "Divestment has played an important role in a profound change, with cultural, political and financial impacts," both direct and indirect.[33] Divestment is recognized across Pennsylvania as a key part of a much-needed campaign to mitigate climate change.
  - The city of Pittsburgh co-sponsored the US Conference of Mayors resolution calling on cities to divest from fossil fuel industries in 2020.[34] Pittsburgh completed divestment of fossil fuels for its pension fund in 2022.[35]
  - The University of Pennsylvania announced it would not invest directly in fossil fuels in 2020.[36] The University of Pittsburgh pledged to divest fully from private fossil fuel investments by 2035.[37]

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[27] Stewarding Our Planet's Resources, Penn State University (last visited Oct. 9, 2023).
[28] "Summary for Policymakers" at 28, in Climate Change 2021: The Physical Science Basis, Working Group I Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (Aug. 2021).
[29] *Id.*
[30] *Id.* at 36.
[31] *Id.* at 19.
[32] 2021 Pennsylvania Climate Impacts Assessment at 45, Pennsylvania Department of Environment (May 2021).
[33] Noam Bergman, Impacts of the Fossil Fuel Divestment Movement: Effects on Finance, Policy and Public Discourse, 10(7) Sustainability (July 2019).
[34] Pittsburgh Cosponsors US Conference of Mayors Resolution Calling on Cities to Divest from Fossil Fuel Industries, City of Pittsburgh (July 1, 2020).
[35] An-Li Herring, Fossil fuel divestment is first, small step in Pittsburgh's sustainable investing strategy, StateImpact Pennsylvania (Apr. 22, 2021).
[36] Susan Snyder, Students are celebrating a small victory after Penn announced it won't invest directly in fossil fuels, Philadelphia Inquirer (Feb. 4, 2020).
[37] Isabelle Schmeler, Pitt Pledges To Divest From Private Fossil Fuel Investments By 2035; Students Say It's Not Enough, WESA News (Feb. 26, 2021).

- George School in Newtown, Pennsylvania announced on April 27, 2015 that it would divest its $150 million endowment of holdings in coal mining companies.[38]
- Leading climate scientist Dr. Michael Mann, the director of the Center for Science, Sustainability & the Media at the University of Pennsylvania, and former Distinguished Professor of Atmospheric Science at Penn State, supports fossil fuel divestment.[39]

III. The Board and Investment Council have breached their duties of care and loyalty by ignoring fossil fuel asset risks.

A. The Board and Investment Council have failed to adequately consider the financial risk of investing in fossil fuel assets.

Fossil fuel assets perform poorly.

- Oil and gas stocks have greatly underperformed other investments over the last ten years. While the S&P 500 has gained approximately 316 percent in the past decade, the S&P Energy Sector (which reflects only the performance of the fossil fuel value chain; renewables are categorized separately) has returned only about half as much.[40]
- The fossil fuel sector saw a long-term decline as other sectors grew: in 1980, energy was nearly thirty percent of the S&P 500 by weight. Today, it is 4.3 percent.[41]
- As a result, fossil-inclusive indices have tended to underperform fossil-free indices over the same period. To take two of the most common indices used in institutional funds, the S&P 500 Index has underperformed the S&P 500 Ex-Fossil Fuel Index by about 50 basis points per year over the past decade, and the MSCI ACWI Index has underperformed the MSCI ACWI Ex-Fossil Fuel Index by about 40 basis points per year over the same timeframe.[42]

The industry's decline is pervasive and systemic.

- By the mid-2010s, the U.S. coal industry was already in freefall. The share of U.S. electricity produced by coal declined from forty-five percent in 2008 to twenty-four percent in 2020, while eight coal companies, including the largest privately held coal firm, declared bankruptcy in 2019.[43]

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[38] Zahra Hirji, Pennsylvania High School Students Convince School to Divest From Coal, Inside Climate News (May 15, 2015).
[39] Jeff Masters, Scientist Mike Mann's must-read book, 'The New Climate War,' Yale Climate Connections (Jan. 25, 2021).
[40] Data from S&P Dow Jones Indices, S&P Global (Aug. 22, 2023).
[41] Historical data: Siblis Research, *cited in* Tom Sanillo & Kathy Hipple, Fossil Fuel Investments: Looking Backwards May Prove Costly to Investors in Today's Market, Institute for Energy Economics and Financial Analysis (Feb. 1, 2019). Current numbers: S&P 500 Data, S&P Global (Aug. 22, 2023).
[42] Data from S&P Dow Jones Indices, S&P Global (Aug. 22, 2023) and ACWI Ex-Fossil Fuels (USD), MSCI (Aug. 22, 2023).
[43] Fred Pearce, As Investors and Insurers Back Away, the Economics of Coal Turn Toxic, Yale Environment 360 (Mar. 10, 2020).

- From the fourth quarter of 2019 to August 2020, seven of the world's largest oil companies lost $87 billion in value as a result of increased emissions regulations and collapsing demand during the COVID-19 pandemic.[44]
- In January 2021, the S&P rating agency warned leading fossil fuel companies that they were at risk of imminent credit downgrades due to economic pressures resulting from the energy transition.[45]
- In August 2020, leading oil company ExxonMobil Corp. was dropped from the Dow Jones Industrial Average for the first time since it joined the index in 1928. The company also left its long-time spot in the top 10 largest companies in the Standard & Poors 500 index in 2019.[46] Since 2008, ExxonMobil's market capitalization has shrunk from $500 billion to around $150 billion in 2020 before climbing to about $445 billion today.[47]
- Between 2010 and 2020, the world's five oil "supermajors"—ExxonMobil, BP, Chevron, Shell, and Total SA—spent far more on dividends and stock buybacks ($556 billion) than they earned from business operations ($340 billion), indicating an unsustainable reliance on borrowing and asset sales to inflate financial performance.[48]
    - All five supermajors have recognized in their financial disclosures that worldwide emissions-related laws and regulations and operation in a carbon-constrained environment will increase costs and reduce demand for their core products.[49]
    - Chevron has publicly recognized that some stakeholders have been divesting from fossil fuel companies and that the possibly compounding effects of divestment could have a negative impact on Chevron's stock price, as well as its access to capital.[50]

The pandemic and Russian invasion further strained the industry's traditional value thesis.

- Russia's invasion of Ukraine caused short-term pressure in energy markets, resulting in sky-high commodity prices for fossil fuels in 2022. However, the invasion also hastened demand destruction for fossil fuels, with higher prices accelerating the shift toward renewables and low-carbon technologies and ultimately undermining the industry's long-term interests.[51] For instance, dramatic price volatility has undermined future demand for liquified natural gas in Asian countries, seen as a growth market for the industry.[52]
- See-sawing fossil fuel commodity prices illustrate the erosion of the industry's traditional value thesis. While fossil fuel investment was once predicated on the industry's ability to produce reliable and steady returns, the industry now finds itself at the mercy of factors outside its control. "[H]oping for war, or relying on a global oil cartel to manipulate

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[44] Jillian Ambrose, Seven top oil firms downgrade $87bn in nine months, The Guardian (Aug. 14, 2020).
[45] Ben Butler, Rating agency S&P warns 13 oil and gas companies they risk downgrades as renewables pick up steam, The Guardian (Jan. 27, 2021).
[46] Tsvetana Paraskova, Exxon Drops Out Of Top 10 In S&P 500, OilPrice.com (Sept. 2, 2019).
[47] Avi Salzman, Why Exxon Is Being Dropped From the Dow, Barron's (Aug. 25, 2020).
[48] Clark Williams-Derry, Tom Sanzillo, & Kathy Hipple, In Q1, Four of Five Oil Majors Paid More Cash to Investors Than They Made From Operations, Institute for Energy Economics and Financial Analysis (May 2020).
[49] Chevron Corp., 2022 Form 10-K, at 24-25.
[50] *Id.*
[51] Tsvetana Paraskova, IEA Slashes Oil Forecast As Demand Destruction Looms Over The Market, Oil Price (July 13, 2022).
[52] Shafiqul Alam, *et al.*, Global LNG Outlook 2023-27, Institute for Energy Economics and Financial Analysis (Feb. 15, 2023).

prices, is the opposite of a sustainable, low-risk business model. Any financial endeavor that depends on bloodshed and geopolitical machinations for its profits is, by its nature, a speculative, high-risk endeavor—a far cry from the blue-chip investment thesis that investors historically demanded from the oil and gas industry."[53]

- Crucially, even the temporary increase in oil prices and subsequent record-breaking profits for the fossil fuel industry could not reverse the pattern of long-term financial decline. In 2023, broad stock market indices continue to underperform fossil-free variants on a ten-year basis (see discussion of index returns above). The market tumult instigated by Russia's invasion of Ukraine did not close this gap.
- As markets adjust to the impact of the invasion of Ukraine, the industry finds itself exhibiting a familiar pattern. Throughout 2023, the sector has been at or near last place out of all components of the S&P 500.[54] In Q2 2023, the oil majors once again found themselves in deficit spending.[55]
- Annualized returns yielded by fossil fuel investments have lagged behind the S&P 500 in the last five years (2.67 percent annual return compared with 11.86 percent) and particularly in the last ten years (0.58 percent annual return compared with 10.5 percent).[56] To put that in perspective, projections show that $100 invested in the broader stock market in 2013 would be worth about $232 in early 2021, while that same $100 would be worth just $42 if invested in fossil fuel production.[57]
- Although fossil fuels posted market-leading gains in 2021 and 2022, this performance is an anomaly after ten years of poor returns. The cumulative effect of these returns is neatly captured in a comparison of broad stock market indexes, for example MSCI's All Country World Index (ACWI) and a fossil-free version of the same index.[58]
    - The fossil-free index consistently outperformed the full ACWI, with annualized gross returns of 9.53% for the 10 years to August 31, 2023, compared to 9.12% for the full ACWI.
    - The difference of 0.41 percentage points is significant because repeated outperformance leads to a large difference in total return. A hypothetical $100 million investment in MSCI's fossil-free index from Nov. 30, 2010, to Aug. 31, 2023, would have grown by nearly $18 million more than the same amount invested in the standard ACWI index.
    - The implication of this data is that broader portfolio diversification into fossil fuels has resulted not in value maximization but in value losses, and a prudent investor would investigate the factors underlying this phenomenon to evaluate continued holdings in fossil fuels.

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[53] Clark Williams-Derry, Declining supermajors profits reveal flaws in the oil and gas business model, Institute for Energy Economics and Financial Analysis (Aug. 9, 2023).
[54] Yardeni Research, Performance 2023 S&P 500 Sectors & Industries (Aug. 21, 2023). *See also* Tom Sanzillo, Taking stock of the oil and gas sector as the transition to sustainable finance proceeds apace, Institute for Energy Economics and Financial Analysis (Aug. 9, 2023).
[55] Clark Williams-Derry, Declining supermajors profits reveal flaws in the oil and gas business model, Institute for Energy Economics and Financial Analysis (Aug. 9, 2023).
[56] See S&P 500 Energy Sector Returns (reflecting a price of $448 on December 31, 2015 and a price of $286 on December 31, 2020) and S&P 500 Index Returns (reflecting a price of $2,044 on December 31, 2015 and $3,756 on December 31, 2020).
[57] S&P 500 Energy Sector Returns (last visited Oct. 5, 2023).
[58] MSCI ACWI ex Fossil Fuels Index, MSCI Inc. (Aug. 31, 2023).

- The fossil fuel industry has barely improved its overall weighting among sectors of the economy as measured by the Standard & Poors 500 index.
    - The energy sector started 2021 at 2.3% of the total value in the index and currently stands at 4.4%.[59]
    - The leading sectors of the economy comprise a far larger portion of the index: information technology (28%), healthcare (13%), financials (12.5%), and consumer discretionary (10.6%).
    - These weights represent investors' expectations about which sectors represent the economy's long-term profit centers.
- In 2021, in the United States, forty percent of electricity from the electric power sector was from non-fossil fuel-based sources.[60] This was in part due to an increased reliance on wind and solar power, which overtook nuclear power in 2021.
- A 2022 study from Ipsos revealed that consumer demand is shifting away from fossil fuels in favor of renewables: eighty-four percent of those surveyed globally and seventy-five percent of those surveyed in the U.S. feel it is important for their country to shift to climate-friendly energy sources in the next five years.[61]
- In 2023, energy stocks have once again begun to fall, indicating the volatility of the fossil fuel industry. Through the start of August 2023, energy stocks lost 1.3 percent in 2023, while the broader stock market had an increase of 17.2 percent.[62]
- The International Energy Agency has determined that, under current scenarios, we cannot develop new oil or gas fields besides those already producing oil or under development.[63]

Looking forward, fossil fuel companies face significant investment risks.

- Nearly all major financial regulatory bodies have noted that climate change and the energy transition create material financial risks for the global economy.
    - The Securities and Exchange Commission is currently preparing disclosure rules to help investors better navigate climate risk. One commissioner recently noted that, "[w]ith climate change, we have ample, well-documented warning of potentially vast and complex impacts to financial markets. . . . Indeed, we have more than just warning as many of those risks have already materialized. Climate change thus poses a pressing and urgent risk — for investors, companies, capital markets, and the economy."[64]
    - The Federal Reserve Board noted in 2021 that "[c]limate change poses significant challenges for the global economy and financial system, with implications for the structure of economic activity, the safety and soundness of

[59] S&P 500 Sector Fact Sheet, S&P Dow Jones Indices, (Aug. 31, 2023).
[60] FOTW #1258, October 3, 2022: In 2021, 40% of the Electricity Produced in the United States Was Derived from Non-Fossil Fuel Sources, Energy.gov (last visited Oct. 27, 2023).
[61] Ipsos Energy & Environment, Global consumers support shift from fossil fuels as they expect spike in energy prices to reduce their purchasing power (Mar. 30, 2022).
[62] *Id.*
[63] Banking on Climate Chaos: Fossil Fuel Finance Report 2022 at 3, Rainforest Action Network, Banktrack, Indigenous Environmental Network, OilChange International, Reclaim Finance, Sierra Club, & Urgewald (2022).
[64] Allison Herren Lee, Shelter from the Storm: Helping Investors Navigate Climate Change Risk (Mar. 21, 2022).

financial institutions and the stability of the financial sector more broadly."[65] In its 2020 financial stability report, the Federal Reserve reported that "climate change, which increases the likelihood of dislocations and disruptions in the economy, is likely to increase financial shocks and financial system vulnerabilities that could further amplify these shocks."[66]
  - In a 2020 report, the Commodity Futures Trading Commission warned that "[c]limate change poses a major risk to the stability of the U.S. financial system and to its ability to sustain the American economy."[67]
- According to a 2019 study by the Mercer consulting firm, investment portfolios will be greatly affected by future global warming. If warming is held to two degrees Celsius — the target set by the 2015 Paris Agreement and one which will still result in widespread harm — the global economy will suffer significant damage from climate change while also transitioning to a renewable energy base. In this scenario, according to the study, portfolio assets in the coal industry will suffer cumulative impacts of 58.9 percentage points by 2030 and 100 percentage points by 2050, while assets in oil and gas will suffer cumulative impacts of 42.1 and 95.1 percentage points, respectively.[68] Other studies have concluded that major energy companies that continue to rely on fossil fuels will lose between thirty and sixty percent of their value.[69]
- Many fossil fuel assets "are likely to become 'unburnable' or stranded" as a result of the clean energy transition.[70] Stranded assets are expected to add up to USD $1 trillion globally under a two-degrees-Celsius warming scenario.[71]
  - Fossil fuel investments can be unstable, as losses due to stranded assets can "cascade" back to their ultimate owners.[72] If anticipated losses in the United States are summed "along the ownership chain," "an upper bound of $681 billion in potential losses could affect financial companies."[73]
  - Despite the risk of stranding, financial markets and fossil fuel companies have continued to invest in fossil fuel assets: fossil fuel reserves owned by publicly traded companies increased from 700 gigatons of CO_2 in 2011 to 1,060 gigatons in 2022. The Carbon Tracker Project, a nonprofit think tank, warns that this could make the ultimate financial fallout worse.[74]
  - Referencing potential losses from stranded assets, The Carbon Tracker initiative concluded that "potential losses for investors [are] clearly a function of how much

[65] Board of Governors of the Federal Reserve System, Federal Reserve Board issues statement in support of the Glasgow Declaration by the Network of Central Banks and Supervisors for Greening the Financial System (NGFS) (Nov. 3, 2021).
[66] Board of Governors of the Federal Reserve System, Financial Stability Report at 58 (Nov. 2020).
[67] Commissioner Rostin Behnam, David Gillers, Bob Litterman, Leonardo Martinez-Diaz, Jesse M. Keenan, Stephen Moch, Managing Climate Risk In the U.S. Financial System, Climate-Related Subcommittee, Market Risk Advisory Committee of the U.S. Commodity Futures Trading Commission (Sept. 2020).
[68] Mercer LLC, Investing in a Time of Climate Change: The Sequel 2019 at 34 (2019).
[69] European Green Party, The Carbon Bubble: The financial risk of fossil fuels and need for divestment at 7 (2020).
[70] J.-F. Mercure, *et al.*, Reframing incentives for climate policy action, Nature Energy 6, 1133-43 (2021).
[71] Sini Matikainen & Eléonore Soubeyran, What are stranded assets?, Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science (July 27, 2022).
[72] *Id.*
[73] *Id.*
[74] Mark Campanale, $1 Trillion of Oil and Gas Assets Risk Being Stranded by Climate Change, BRINK News (Jan. 22, 2023).

    - of this risk is already priced into market valuation of fossil fuels companies — it is up to individual institutions to assess how the transition will pan out, and their risk exposure as a result.”[75]
    - A 2022 study from academic economists found that pensions and other institutional investors are disproportionately on the hook for stranded assets: “We calculate that global stranded assets as present value of future lost profits in the upstream oil and gas sector exceed US$1 trillion under plausible changes in expectations about the effects of climate policy. . . . Most of the market risk falls on private investors, overwhelmingly in OECD countries, including substantial exposure through pension funds and financial markets.”[76]
- In addition to reducing an investor’s exposure to risky holdings, divestment can help influence companies, markets, and civil society more broadly as to adopt more stringent climate policies. As such, it can play a role in both reducing a portfolio’s risk exposure, and decarbonizing the real economy.[77]

The traditional value thesis that justified investment in the fossil — based on the assumptions that demand for oil, gas, and coal will continue to grow and that companies’ extensive untapped reserves will ensure future profits — is no longer tenable.[78]

- Transition and competitive risk: As the economy decarbonizes, global demand for oil, gas, and coal will fall. Meanwhile, competitive pressure from green technologies is crowding out fossil fuels in the electricity and transportation sectors, which have traditionally been the primary customers for fossil fuel companies.[79]
- Physical risk: Much of the oil industry’s physical assets lie in flood-prone areas. As sea levels rise and severe weather grows more frequent, climate chaos could hinder the ability to access these assets.[80]
- Asset risk: Meeting Paris Agreement goals will require keeping vast swaths of proven reserves in the ground. When a company’s valuation is rooted in assumptions that this extraction will take place, the collision between market assumptions and reality becomes a source of financial instability. A similar story is true for the pipelines and other infrastructure supporting the fossil fuel economy: changing market conditions may force the early retirement of some infrastructure, creating losses for investors betting on their continued operation.[81]

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[75] Thom Allen & Mike Coffin, Unburnable Carbon: Ten Years On at 35, the Carbon Tracker Initiative (June 2022).
[76] Gregor Semienuik, *et al.*, Stranded fossil-fuel assets translate to major losses for investors in advanced economies, Nature Climate Change (May 26, 2022).
[77] For a study regarding divestment’s ability to reduce a company’s carbon emissions, see Martin Rohleder et al, The effects of mutual fund decarbonization on stock prices and carbon emissions, Journal of Banking and Finance (Jan. 2022). For a study regarding how the divestment movement has increased support for other climate regulations like a carbon tax, *see* Todd Schifeling and Andrew Hoffmam, Bill McKibben’s Influence on U.S. Climate Change Discourse, Organization and Environment (Nov. 2017).
[78] Tom Sanzillo, Dan Cohn, and Connor Chung, Two Economies Collide: Competition, conflict, and the financial case for fossil fuel divestment, Institute for Energy Economics and Financial Analysis (Oct. 2022); *see id.* section II.C for further discussion of these risks
[79] *Id.* at 35.
[80] *Id.* at 44.
[81] *Id.* at 43-44.

- Legal risk: The fossil fuel industry faces serious legal challenges, including claims that it misled investors and the public about climate change, that it is tortiously liable for climate damages, and that its business operations violate environmental protection laws and emissions reduction commitments. With many of these cases moving forward, the industry could find itself facing significant legal exposure.
    - A report from the law firm Clyde & Co LLP concludes that "[o]il majors are currently facing threatened or pending litigation on a number of fronts and across a number of jurisdictions. Their liability insurers and reinsurers will undoubtedly be watching these cases with keen interest . . . Companies in a number of sectors may find themselves exposed not just to damages claims for climate change, but also the cost of defending litigation, the reputational harm of being associated with such litigation and the consequential impacts on operations and value."[82]
    - Since the Clyde & Co report, there have been sixty-six global climate suits against corporations worldwide.[83] In Milieudefensie et al.v. Royal Dutch Shell (2022), The Hague District court ruled Shell had a duty to comply with the Paris Climate Agreement, and subsequently ordered the company "to reduce CO2 emissions associated with its products by 45 per cent from 2019 levels by 2030."[84]
- Regulatory risk: The fossil fuel industry faces a patchwork of policy responses from the world's countries that cumulatively pose significant risks to its business model. Regulatory approvals of infrastructure projects are no longer certain, economic taxonomies that define categories of "clean" and "dirty" investments threaten to realign investment capital away from the industry, electric utilities face regulatory obligations to increase the use of renewable energy, and end-use regulations like bans on single-use plastics threaten to decrease demand for petrochemical products.[85]
- Geopolitical risk: As discussed above, the industry's profitability has become reliant on a factor largely outside its control: the commodity price of fossil fuels. As nation states deploy oil and gas as a tool of political leverage in global power bloc alignments, market volatility is likely to intensify, putting long-term capital plans and existing contractual arrangements at risk.[86]
- Fossil fuel companies seem to be doing little to mitigate these risks, with "fossil fuel companies [having] refused to meaningfully participate in the necessary energy transition. As a result, they are structurally unprepared for the low-carbon future."[87] In other words, "[t]he energy sector has gone from a reliably consistent, stable, blue-chip contributor to institutional investment funds to a high-risk set of companies and national governments with a speculative investment rationale and a negative long-term financial outlook. The business model no longer works. Based on this history, investors should carefully consider whether their interests and the industry's interests still align."[88] From a financial perspective alone, "investors should move away from fossil fuels because the

[82] Clyde & Co LLP, Climate change: Liability risks at 37 (Mar. 2019).
[83] Search, Climate Change Litigation Databases (last visited Aug. 30, 2023).
[84] United Nations Environment Programme, Global Climate Litigation Report: 2023 Status Review at 50-51 (2023).
[85] Tom Sanzillo, Dan Cohn, & Connor Chung, Two Economies Collide: Competition, conflict, and the financial case for fossil fuel divestment at 38-41, Institute for Energy Economics and Financial Analysis (Oct. 2022).
[86] *Id.* at 31-34.
[87] *Id.* at 25.
[88] *Id.* at 52.

coal, oil and gas sectors are confronted with competitive pressures that they are ill-prepared to navigate."[89]

- Another way of assessing the future of the fossil fuel industry is through its employees.[90] Nearly half of people currently working in the energy sector want to leave the industry everywhere within the next five years. Furthermore, over half of employees working in the fossil fuel industry said that they are interested in switching to working in renewables. A recent study found that "58% of millennials questioned working in particular sectors due to their negative image, with oil and gas being regarded as the most unappealing globally,"[91] which has led to a reliance on crews returning after retirement.
- In an August 2020 open letter, over 100 leading economists, including Nobel Prize laureate Joseph Stiglitz and former Secretary of Labor Robert Reich, identified the continued existence of the fossil fuel economy as "fundamentally incompatible" with long-term social and economic well-being and cited divestment as an essential tactic for bringing about systemic change: "When our largest banks, most influential investors and most prestigious universities place bets on the success of the fossil fuel industry, they provide it with the economic and social capital necessary to maintain the dangerous status quo. Instead, these institutions should divest from fossil fuel companies and end financing of their continued operations while reinvesting those resources in a just and stable future."

B. <u>The Board and Investment Council have failed to adequately consider the risks posed by climate change to Penn State's property and stakeholders' health.</u>

Climate change may damage Penn State infrastructure and harm the health of Penn State students, faculty, and staff. Continued investments undermine the Board's duty of loyalty to invest in the best interests of the Penn State community.

- Several Penn State campuses are already at risk of flooding. Others' surroundings, including access roadways, are subject to this risk. As a result of climate change, Pennsylvania is expected to experience dramatic increases in extreme precipitation events and flooding.[92] These will particularly affect already at-risk areas.
- More research is needed to understand the scope of other climate-related infrastructure risks. But with 25 campuses across the state, the impacts to Pennsylvania generally—heat waves, contaminated water, urban heat islands, reduced crop yields, landslides, and livestock deaths—will necessarily impact Penn State's campuses, too.
  - Worsening heat waves and increasing temperatures will increase Penn State's energy costs and stress University infrastructure.[93]

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[89] *Id.* at 1.
[90] Regina Mayor & Stefano Moritsch, "Top Risks Facing the Oil and Gas Industry in 2022 - and What You Can Do about It," KPMG (2022).
[91] Andreas Exarheas, Are Enough Young People Entering the Oil and Gas Workforce?, Rigzone (2023).
[92] *See generally* 2021 Pennsylvania Climate Impacts Assessment, Pennsylvania Department of Environment (May 2021).
[93] 2021 Pennsylvania Climate Impacts Assessment, Pennsylvania Department of Environment at 73-74 (May 2021).

  - Campuses in southwestern Pennsylvania—a region with high landslide susceptibility and incidence—are at risk of experiencing direct damage to energy and transportation infrastructure.[94]
- Global and local research outlines how health risks from continued fossil fuel usage, both from climate change and fracking, will impact Penn State students, faculty, and staff.
  - Fossil fuel emissions are directly responsible for nearly one-fifth of all deaths globally. Particulate matter spread by fossil fuel combustion killed eight million people in 2018, about eighteen percent of total deaths that year.[95]
  - Over 5,000 fracking wells are in operation across Pennsylvania. Drilling process pollutes air[96] and water is correlated with nausea, headaches, and nosebleeds. Fracking is linked with asthma and lymphoma in children.[97]
    - Pennsylvanian children who live in proximity to fracking sites are two to three times more likely to receive a leukemia diagnosis than those who live further away.[98]
  - Landslides and erosion increase the risk of natural gas pipeline explosions, affecting nearby air and infrastructure for Penn State faculty, students, and staff.[99] In 2018, Energy Transfer's Revolution pipeline exploded in Center Township, Beaver County—in the same municipality as Penn State Beaver—destroying a house.[100]

C. <u>The Board and Investment Council have failed to adequately consider the reputational costs of holding fossil fuel assets.</u>

- Beginning in the 1980s, in response to mounting evidence of climate risks,[101] fossil fuel companies halted their climate research and "began a campaign to discredit climate science and delay actions perceived as contrary to their business interests."[102] This campaign was multi-pronged, consisting of the development of internal policies to

[94] 2021 Pennsylvania Climate Impacts Assessment, Pennsylvania Department of Environment at 78-82 (May 2021).
[95] Karn Vohra, Alina Vodonos, Joel Schwartz, Eloise A. Marais, Melissa P. Sulprizio, and Loretta Mickley, Global mortality from outdoor fine particle pollution generated by fossil fuel combustion, 195 Envt'l Res. 110754 (2021).
[96] Mireya Navarro, Institute's Gas Drilling Report Leads to Claims of Bias and Concern for a University's Image, New York Times (June 11, 2012).
[97] Now We're Fracked: Fracking's Public Health Crisis, Food & Water Watch (February 2021).
[98] Cassandra J. Clark, Nicholaus P. Johnson, Mario Soriano Jr, Joshua L. Warren, Keli M. Sorrentino, Nina S. Kadan-Lottick, James E. Saiers, Xiaomei Ma, and Nicole C. Deziel, Unconventional Oil and Gas Development Exposure and Risk of Childhood Acute Lymphoblastic Leukemia: A Case–Control Study in Pennsylvania, 2009–2017, Environmental Health Perspectives (August 2022).
[99] Susan Phillips, Federal pipeline safety regulators issue warning on floods and subsidence, State Impact PA (May 2019). Larysa Dyrszka, Kathleen Nolan, Carmi Orenstein, Ted Schettler, Barton Schoenfeld, and Sandra Steingraber, Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking and Associated Gas and Oil Infrastructure at 71-75 (October 2023).
[100] *Id.*
[101] *See* supra at Part III.
[102] Brief of Amici Curiae Robert Brulle, Center for Climate Integrity, Justin Farrell, Benjamin Franta, Stephan Lewandowsky, Naomi Oreskes, & Geoffrey Supran in Support of Appellees and Affirmance at 17, <u>County of San Mateo v. Chevron Corporation, et al., County of Imperial Beach v. Chevron Corporation, et al., County of Marin v. Chevron Corporation, et al., County of Santa Cruz, et al., v. Chevron Corporation, et al.</u>, Nos. 18-15499, 18-15502, 18-15503, 18-16376 (9th Cir. 2019).

suppress the companies' own knowledge, public communications to sow doubt about the dangers of fossil fuels, and the funding of organizations and research to undermine climate science.[103]

  - In 2019, testimony to the Senate Special Committee on the Climate Crisis, Dr. Justin Farrell described a decades-old movement "to deceive the American people about the reality of climate change."[104]
  - Academic research has confirmed that the fossil fuel industry's "major tactic was and continues to be manufacturing uncertainty . . . [and] constantly asserting that the evidence is not sufficient to warrant regulatory action . . . they have ballooned into a full-scale assault on the multifaceted field of climate science, the IPCC, scientific organizations endorsing [climate change], and even individual scientists."[105]

- Fossil fuel companies targeted Penn State researchers to discredit their work.
  - Following publication of his famous "hockey stick graph," former Penn State climate scientist Michael E. Mann faced years of efforts to discredit him and his work, and "many [of these] attacks . . . trace directly to involvement by the fossil fuel industry."[106] One of the main perpetrators of such harassment was a Koch-funded think tank.[107]
  - ExxonMobil has repeatedly sought to portray the Intergovernmental Panel on Climate Change—a coordinating body of respected scientists and academics, including Penn State faculty, who publish periodic reports on climate science to aid policymakers—as biased and untrustworthy.[108]
- Fossil fuel companies successfully targeted Penn State to acquire industry-friendly research that has an appearance of independence despite being, in fact, compromised.[109]
  - Penn State's Marcellus Center for Outreach and Research is funded by a consortium of a dozen gas companies, including large shale gas players.[110]
  - The Marcellus Shale Coalition, a trade group of oil and gas companies, has played a key role in funding research at Penn State. The group paid Penn State for three economic-impact studies beginning in 2009.[111]
  - Initially, these studies found evidence favorable to the fracking industry's political positions while obfuscating the researchers' ties to the oil and gas industry, as well as the research's funding source.[112] For instance, Penn State researchers claimed that "a tax on natural gas production in Pennsylvania would

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[103] *See generally id.*
[104] Senate Dems, Senate Dems Special Committee on the Climate Crisis Hearing (Oct. 29, 2019).
[105] Riley E. Dunlap & Peter J. Jacques, Climate Change Denial Books and Conservative Think Tanks: Exploring the Connection, 57(6) Am. Behav. Scientist 699, 700 (2013) (internal citations omitted).
[106] How the Fossil Fuel Industry Harassed Climate Scientist Michael Mann, Union of Concerned Scientists (Oct. 12, 2017).
[107] *See id.*
[108] David Hasemyer & John H. Cushman Jr., Exxon Sowed Doubt About Climate Science for Decades by Stressing Uncertainty, Inside Climate News (Oct. 22, 2015).
[109] Reid R. Frazier and Olivia Garber, Public colleges, private money: how research about Marcellus Shale is funded, Public Source (Nov. 7, 2011).
[110] *Id.*
[111] Jim Efstathiou Jr., Penn State Faculty Snub of Gas Study Ends Funding From Drillers, Bloomberg (Oct. 3, 2012).
[112] Reid R. Frazier and Olivia Garber, Public colleges, private money: how research about Marcellus Shale is funded, Public Source (Nov. 7, 2011).

harm the state's economy."[113] This study, in turn, was used by the fossil fuel industry to kill a state tax on gas drillers.[114] Ultimately, this purportedly unbiased research would be labeled as "advocacy for producers" by non-profit watchdog groups.[115]

    - A Penn State professor who had received funding from fossil fuel companies co-authored a study stating that relatively lax regulations made oil and gas development safer in Pennsylvania and concluded that fracking could be done safely in New York.[116]
    - Funding for some studies was canceled after faculty raised concerns.[117]
- Fossil fuel companies purchased the imprimatur of Penn State and its presumed authority and objectivity. In part due to Penn State's influence and authority, more than 5000 wells have been drilled in Pennsylvania's portion of the Marcellus Shale,[118] disproportionately in already vulnerable communities.[119]
    - Penn State researchers accepting industry money served on government groups. One served on Governor Tom Corbett's Marcellus Shale Advisory Commission. This Advisory Commission went on to recommend regulations for state management of unconventional gas and oil drilling.[120]
- Penn State's reputation, used to attain influence, was subsequently tarnished as the public grew aware of fracking's risks and this impropriety.
    - On June 25, 2020, former Attorney General Josh Shapiro announced the findings of a Pennsylvania grand jury condemning the DEP and state Department of Health for inadequate oversight of the natural gas industry.[121]
    - The Marcellus Shale Coalition continues to cite Penn State academic studies that claim that there is no clear evidence that fracking harms public health or contaminates groundwater with chemicals.[122]
    - This includes skewing findings like the one made by Penn State Prof. Susan Brantley that "[water quality in a heavily fracked area] does not appear to be getting worse with time, and may even getting better,"[123] by stating that this research shows that "safe, responsible natural gas development has little to no impact on water quality."[124]

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[113] Jim Efstathiou Jr., Penn State Faculty Snub of Gas Study Ends Funding From Drillers, Bloomberg (Oct. 3, 2012).
[114] *Id.*
[115] *Id.*
[116] Reid R. Frazier and Olivia Garber, Public colleges, private money: how research about Marcellus Shale is funded, Public Source (Nov. 7, 2011).
[117] Jim Efstathiou Jr., Penn State Faculty Snub of Gas Study Ends Funding From Drillers, Bloomberg (Oct. 3, 2012).
[118] *Id.*
[119] Brian Bienkowski, Poor Communities Bear Greatest Burden from Fracking, Scientific American (May 6, 2015).
[120] Anne Danahy, Q&A: Terry Engelder, Penn State scientist whose work led to the shale gas boom, talks about grand jury report on fracking, State Impact Pennsylvania (July 13, 2020).
[121] Reid Frazier and Susan Phillips, Pa. grand jury report on fracking: DEP failed to protect public health, State Impact Pennsylvania (June 25, 2020).
[122] Jon Hurdle, As Evidence Mounts, New Concerns About Fracking and Health, Yale Environment 360 (Nov. 17, 2022).
[123] Matthew Carroll, Bradford Co. water quality improves; impacts rare near shale gas wells, Penn State News (June 12, 2018).
[124] Independent Studies Confirm Fracking Poses No Threat to Drinking Water, Marcellus Coalition (June 19, 2018) (ignoring correlative factors).

    - But today, there is “no longer any doubt that fracking harms human health.”[125] Drilling process pollutes air[126] and water; kills livestock; is correlated with nausea, headaches, and nosebleeds. Fracking is linked with asthma, lymphoma in children.[127] According to the 2020 Grand Jury Report, “clear and convincing evidence . . . leads us to conclude that [fracking] industry operations in Pennsylvania have made our children sick.”[128]
    - The impact is not only environmental, but also economic. Pennsylvanians near fracking sites also seal with decreased housing value for homes reliant on groundwater sources, for fear of water contamination.[129] The benefits of fracking have not translated into widespread, long-term economic improvement; gas drilling has created fewer than half the jobs predicted by Penn State researchers in 2009.[130] “Natural-gas companies are much more likely to weigh on the local economy than to rescue it.”[131]
- While an illustrative example of the fossil fuel industry’s impact on Penn State’s reputation, industry impropriety is not limited to fracking research.
    - Instead, in another illustrative example, the former director of Penn State’s Environment Policy Center Frank Clemente was the subject of a GreenPeace investigation for his work as an “academic-for-hire” for the coal industry,[132] and agreed to hide funding sources.[133] Clemente has used his legitimacy as a Penn State professor to justify his belief that “fossil fuels are the solution, not the problem.”[134]
- Continued investment in an industry that has intentionally harmed Penn State’s reputation and Pennsylvanians’ trust of the institution runs directly contrary to the institution’s well-being.
- Further, continued investment in fossil fuels harms Penn State’s capacity to attract students. Penn State’s fiduciaries have recognized that investments signal institutional values. Today, prospective students increasingly want to attend and support universities that prioritize environmental sustainability.[135]

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[125] Reid Frazier and Susan Phillips, Pa. grand jury report on fracking: DEP failed to protect public health, State Impact Pennsylvania (June 25, 2020).
[126] Mireya Navarro, Institute’s Gas Drilling Report Leads to Claims of Bias and Concern for a University’s Image, New York Times (June 11, 2012).
[127] Now We’re Fracked: Fracking’s Public Health Crisis, Food & Water Watch (February 2021).
[128] Reid Frazier and Susan Phillips, Pa. grand jury report on fracking: DEP failed to protect public health, State Impact Pennsylvania (June 25, 2020).
[129] Amy Mall, New economic study: fracking risks reduce value of properties dependent on groundwater, Natural Resource Defense Council (Nov. 1, 2012).
[130] Jim Efstathiou Jr., Penn State Faculty Snub of Gas Study Ends Funding From Drillers, Bloomberg (Oct. 3, 2012).
[131] Peter Eavis, Fracking Once Lifted Pennsylvania. Now It Could Be a Drag., New York Times (Mar. 31, 2020)
[132] Lawrence Carter and Maeve McClenaghan, Exposed: Academics-for-hire agree not to disclose fossil fuel funding, GreenPeace (Aug. 12, 2015).
[133] John Schwartz, Greenpeace Subterfuge Tests Climate Research, New York Times (Dec. 9, 2015).
[134] Frank Clemente, Elitist students don't realize fossil fuels are the solution, not the problem: As I See It, PennLive (Apr. 3, 2015).
[135] *See, e.g.*, Melissa Ezarik, Actions and Hopes of the Sustainability-Focused Student, Inside Higher Education (Jan. 2, 2023) (explaining that 45% of college students considered environmental sustainability in their college enrollment decision)

    - In 1987, Penn State's Board of Trustees voted to divest $6.3 million from companies doing business in South Africa after student and alumni activists called on the Board of Trustees to "take a moral stand against apartheid."[136]
    - The University recognized the effects of continued investments would hurt Black student enrollment, fundraising,[137] and state funding. [138]
    - No financial rationale was cited for this decision.[139]

D. **<u>The Board and Investment Council have failed to adequately consider industry misconduct.</u>**

Allegations that the fossil fuel industry has attempted to defraud investors are widely known and well documented. The Trustees' persistence in buying industry securities in spite of these warning signs violates the duty of care.

- Fossil fuel companies have allegedly long engaged in a fraudulent attempt to hide the financial risks associated with emissions regulations and future fossil fuel extraction. This alleged fraud has been a matter of public record since at least 2015,[140] and a matter of common knowledge for investors since at least 2019.
- In 2019, the Massachusetts Attorney General sued ExxonMobil for three alleged violations of the Massachusetts Consumer Protection Act.
    - The state's Second Amended Complaint alleges that "[f]or many years, Exxon Mobil Corporation . . . the world's largest publicly traded oil and gas company, systematically and intentionally has misled Massachusetts investors and consumers about climate change. In order to increase its short-term profits, stock price, and access to capital, ExxonMobil has been dishonest with investors about the material climate-driven risks to its business and with consumers about how its fossil fuel products cause climate change—all in violation of Massachusetts law."[141]
    - According to the Complaint, ExxonMobil scientists in the 1970s accurately predicted the rate of global warming that would be caused by fossil fuel use. The company was well aware of how its business activity would damage the planet; for example, a company scientist told management in 1981 that climate change will "produce effects which will indeed be catastrophic" and that it would be necessary to sharply reduce fossil fuel use.[142]
    - Despite this knowledge, ExxonMobil — like many of its peers in the industry — persisted in a "highly misleading" campaign to spread doubt about climate science and to prevent measures that would decrease the use of fossil fuels. As

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[136] African American Chronicles: South Africa, Black History at Penn State (last accessed Oct. 9, 2023).
[137] *Id.*
[138] Robin Hoecker, The Black and White Behind the Blue and White: A History of Black Student Protests at Penn State at 101, Schreyer Honors College (Spring 2002).
[139] African American Chronicles: South Africa, Black History at Penn State (last accessed Oct. 9, 2023).
[140] Neela Banerjee, Lisa Song, & David Hasemyer, Exxon's Own Research Confirmed Fossil Fuels' Role in Global Warming Decades Ago, Inside Climate News (Sept. 16, 2015).
[141] Second Amended Complaint, <u>Massachusetts v. ExxonMobil</u>, No. 1984-CV-03333-BLS1 (Mass. Sup. Ct. June 5, 2020) at 1.
[142] *Id.* at 5.

late as 2015, ExxonMobil's CEO was publicly disputing the scientific consensus that rising atmospheric carbon dioxide levels produce catastrophic warming.[143]
  - The Attorney General concluded that ExxonMobil's value will fall precipitously in coming years, thanks in large part to an expected transition to renewable energy: "When those reserves cease to have future value, other things being equal, ExxonMobil securities are likely to decline in value as well, perhaps dramatically, much as the market value of coal companies has collapsed in recent years as the deployment of cleaner, more efficient fuel sources has reduced expected future coal demand."[144]
  - According to the Complaint, "[t]he systemic risk climate change poses to the world's financial markets is comparable to, and could well exceed, the impact of the 2008 global financial crisis . . . The risks of climate change and regulatory responses to it pose an existential threat to [the company's] business model and therefore to investments in ExxonMobil securities, including by Massachusetts investors."[145]
  - The Attorney General explicitly stated that investment in companies like ExxonMobil puts investors at risk: "ExxonMobil's omissions and misrepresentations put its Massachusetts investors at increased risk of losses in the future, as greater recognition of the physical and transition risks of climate change to ExxonMobil, other fossil fuel companies, and the global economy increasingly diminishes the market valuation of ExxonMobil securities, potentially under sudden, chaotic, and disorderly circumstances."[146]
- In September 2020, the State of Connecticut sued ExxonMobil for violations of the state's Unfair Trade Practices Act, alleging that the company has for decades "misled and deceived Connecticut consumers about the negative effects of its business practices on the climate."[147]
  - The lawsuit alleges that, beginning in the 1980s, ExxonMobil defied its own scientists' warnings dating back to the 1950s and "began a systematic campaign of deception to undermine public acceptance of the scientific facts and methods relied upon by climate scientists who knew that anthropogenic (human-caused) climate change was real and dangerous to humanity."[148]
  - The complaint goes on to note that "ExxonMobil's strategy to create uncertainty about climate science successfully kept consumers purchasing ExxonMobil products by deceiving consumers about the serious harm caused by ExxonMobil's industry and business practices."[149]
- Also in September 2020, Hoboken became the first city in New Jersey to sue fossil fuel companies for climate change damages. Hoboken "seeks to recover the cumulative cost of hundreds of millions of dollars to compensate the city for past, current and future costs associated with climate change adaptation, remediation, and economic losses." Hoboken alleges violations of the New Jersey Consumer Fraud Act and claims for negligence and

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143 *Id.* at 9, 50-51.
144 *Id.* at 8.
145 *Id.* at 65, 80-81.
146 *Id.* at 138.
147 Complaint, <u>Connecticut v. ExxonMobil</u>, No. HHDCV206132568S (Conn.. Super. Ct. Spe. 14, 2020) at 1.
148 *Id.*
149 *Id.* at 2.

common law remedies "to prevent and abate hazards to public health, safety, welfare and the environment."[150]

- In January 2021, a former senior accounting analyst for ExxonMobil alleged in a whistleblower complaint to the Securities and Exchange Commission that the company has repeatedly overstated the value of its U.S. oil and gas assets — which will likely prove unprofitable due to the collapse of the fracking boom — fraudulently inflating the company's worth to investors by as much as fifty-six billion dollars.[151]
- In April 2021, neighboring New York City sued Exxon Mobil, Royal Dutch Shell, and the American Petroleum Institute (an industry trade association) for systematically and intentionally deceiving consumers.[152] A former senior accounting analyst for ExxonMobil has alleged in a whistleblower complaint to the Securities and Exchange Commission that the company has repeatedly overstated the value of its U.S. oil and gas assets — which will likely prove unprofitable due to the collapse of the fracking boom — fraudulently inflating the company's worth to investors by as much as fifty-six billion dollars.[153]
- In June 2021, an Exxon lobbyist admitted that ExxonMobil was engaged in a concerted effort to block climate change measures and deceive the public.[154] This revelation led the House Oversight Committee to ask the chief executives of Exxon Mobil, Chevron, BP, and Shell, along with the American Petroleum Institute and the Chamber of Commerce, to appear at a hearing and provide emails and documents about whether the industry led an effort to mislead the public and prevent action to fight climate change.[155]
- According to PBS, as of August 2022, "there [were] at least 20 pending lawsuits filed by cities and states across the U.S., alleging major players in the fossil fuel industry misled the public on climate change to devastating effect."[156]
- In November of 2022, sixteen Puerto Rican municipalities filed a complaint against ExxonMobil Corp, Shell plc, Chevron Corp, BP plc and others, alleging that they had "misrepresented the dangers of the carbon-based products which they marketed and sold despite their early awareness of the devastation they would cause Puerto Rico."[157] Specifically, the complaint seeks damages for the 2017 hurricane season (Hurricanes Irma and Maria), which left thousands dead and much of the island's critical

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[150] Hoboken becomes first NJ city to sue Big Oil companies, American Petroleum Institute for climate change damages, Hoboken, NJ Gov (Sept. 2, 2020).
[151] Nick Cuningham, Exclusive: Whistleblower Accuses Exxon of 'Fraudulent' Behavior for Overvaluing Fracking Assets For Years, Desmog Blog (Feb. 2, 2021).
[152] New York City Sues ExxonMobil, Shell, BP, and The American Petroleum Institute for Systematically and Intentionally Deceiving New Yorkers, The Official Website of the City of New York (Apr. 22, 2021).
[153] Nick Cuningham, Exclusive: Whistleblower Accuses Exxon of 'Fraudulent' Behavior for Overvaluing Fracking Assets For Years, Desmog Blog (Feb. 2, 2021).
[154] Hiroko Tabuchi, In Video, Exxon Lobbyist Describes Efforts to Undercut Climate Action, The New York Times (June 30, 2021).
[155] Timothy Gardner, U.S. House panel to probe oil companies over climate disinformation, Reuters (Sept. 16, 2021).
[156] Bruce Gill, U.S. Cities and States Are Suing Big Oil Over Climate Change. Here's What the Claims Say and Where They Stand, PBS (Aug. 1, 2022).
[157] Municipalities of Puerto Rico v. Exxon Mobil Corp, et al., No. 3:22-cv-01550, Complaint for Damages, at p. 4 (2022).

infrastructure in peril.[158] Filed in federal court, this case is the first with Racketeer Influenced and Corrupt Organizations Act (RICO) claims.[159]

- Despite these revelations of alleged fraudulent behavior, and in the face of existential threats to their business models, oil companies continue to refuse to provide investors with any assurances that they are preparing for the effects of climate change. ExxonMobil and Chevron, for example, have blocked shareholder proposals that ask the companies to describe how they will adjust their operations to satisfy the warming targets established under the Paris Agreement.[160]

Fossil fuel companies remain committed to a business model that is economically and environmentally unsustainable. They continue to inappropriately bet on long-term fossil fuel reliance.

- Fossil fuel companies knew about the connection between their products and climate change decades before the general public, "as early as the 1950s and no later than 1968."[161]
    - Coal industry publications suggested as early as 1966 that the combustion of fossil fuels could cause "vast changes in the climates of the earth."[162] By 1968, the American Petroleum Institute, an industry trade group, was familiar with a study concluding that the burning of fossil fuels was likely to create significant environmental consequences.[163]
    - As early as 1977, Exxon scientists had privately concluded that "there is general scientific agreement that the most likely manner in which mankind is influencing the global climate is through carbon dioxide release from the burning of fossil fuels."[164]
    - Shell internally reached similar conclusions by at least the 1980s,[165] as did Mobil (then separate from Exxon).[166] By the 1980s, major fossil fuel companies had "internally acknowledged that climate change was real, it was caused by fossil

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[158] Clark Mindock, Puerto Rican towns sue Big Oil under RICO alleging collusion on climate denial, Reuters (Nov. 29, 2022).
[159] Korey Silverman-Roati & Maria Antonia Tigre, Municipalities of Puerto Rico v. Exxon: a unique class action against fossil fuel companies presses for climate accountability in the United States, Climate Law: A Sabine Center Blog, Sabin Center for Climate Change Law (Dec. 2, 2022).
[160] Dana Drugman, Exxon, Chevron, Chase Reject Shareholder Requests to Address Climate Risk, The Climate Docket (Jan. 29, 2020).
[161] Brief of Amici Curiae Robert Brulle, Center for Climate Integrity, Justin Farrell, Benjamin Franta, Stephan Lewandowsky, Naomi Oreskes, and Geoffrey Supran in Support of Appellees and Affirmance, County of San Mateo v. Chevron Corporation, et al., County of Imperial Beach v. Chevron Corporation, et al., County of Marin v. Chevron Corporation, et al., County of Santa Cruz, et al., v. Chevron Corporation, et al., Nos. 18-15499, 18-15502, 18-15503, 18-16376 at 2 (9th Cir. 2019).
[162] Elan Young, Exxon knew -- and so did coal, Grist (Nov. 29, 2019).
[163] Oliver Milman, Oil industry knew of 'serious' climate concerns more than 45 years ago, The Guardian (Apr. 13, 2016).
[164] Shannon Hall, Exxon Knew about Climate Change almost 40 years ago, Sci. Am. (Oct. 26, 2015).
[165] John H. Cushman Jr., Shell Knew Fossil Fuels Created Climate Change Risks Back in 1980s, Internal Documents Show, Inside Climate News (Apr. 5, 2018).
[166] Nicholas Kusnetz, Exxon Turns to Academia to Try to Discredit Harvard Research, Inside Climate News (Oct. 20, 2020).

fuel consumption, and it would have significant impacts on the environment and human health."[167]

- A 2017 report by the Carbon Disclosure Project (CDP) found that seventy-one percent of all global greenhouse gas emissions since 1988 "can be traced to just 100 fossil fuel producers."[168]
- The fossil fuel industry has consistently refused to participate in the transition to renewable energy.
  - According to the International Energy Agency, just one percent of the fossil fuel industry's cash spending, proportionally speaking, was devoted to low-carbon energy in 2022.[169]
  - Numerous independent analyses have found no evidence that the industry is meaningfully aligned with net-zero goals.
    - A 2023 report by major climate data disclosure clearinghouse CDP found that the "oil and gas sector has made almost no progress towards the Paris Agreement goals since 2021."[170]
    - According to the March 2023 company-level benchmark from investor consortium Climate Action 100+, no evaluated fossil fuel company is in meaningful alignment with a Paris-aligned pathway.[171]
    - A 2022 report by climate research group Oil Change International concluded that "the climate promises of major U.S. and European oil and gas companies still fail to meet the bare minimum for alignment with the Paris Agreement."[172]
    - Financial think tank Carbon Tracker found in a 2022 analysis that most fossil fuel companies remain far away from Paris alignment, with even the best climate plans containing significant loopholes and credibility gaps.[173]
    - A 2022 peer-reviewed academic study found that none of the most prominent European or American oil and gas majors have financial strategies to back up their climate rhetoric.[174]
    - A study by the London School of Economics found that no fossil fuel major had carbon-reduction plans that were Paris-compliant as of October 2020.[175]
    - The American Petroleum Institute has asserted that the oil industry remains essential to the American economy and promised to resist President Biden's climate agenda.[176]

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[167] Brief of Amici Curiae Robert Brulle, *et al.*, *supra* at note 155, at 15.
[168] New report shows just 100 companies are source of over 70% of emissions, Carbon Disclosure Project (July 2017).
[169] World Energy Investment 2023, International Energy Agency (May 2023).
[170] Research reveals no oil and gas companies have plans in place to phase out fossil fuels, CDP (Jun. 29, 2023).
[171] Net Zero Company Benchmark, Climate Action 100+ (2023).
[172] David Tong, Big Oil Reality Check, Oil Change International (May 24, 2022).
[173] Mike Coffin & May O'Connor, Absolute Impact: Why Oil and Gas Companies Need Credible Plans to Meet Climate Targets, CarbonTracker (May 12, 2022).
[174] Mei Li, *et al.*, The clean energy claims of BP, Chevron, ExxonMobil and Shell: A mismatch between discourse, actions and investments, PLoS ONE 17(2) (2022).
[175] Anjli Raval, Big fossil fuel groups all failing climate goals, study shows, Financial Times (Oct. 6, 2020).
[176] Nicholas Kusnetz, American Petroleum Institute Chief Promises to Fight Biden and the Democrats on Drilling, Tax Policy, Inside Climate News (Jan. 14, 2021).

- Individual fossil fuel companies, for their part, also continue to bet on long-term fossil fuel reliance.
    - In 2023, BP abandoned its (already insufficient) commitment to reduce carbon emissions thirty-five to forty percent by 2030 and increased gas production targets.[177]
    - In 2023, Shell increased its investment targets for fossil fuels and dropped plans to expand investment in renewables.[178] Several leading executives from Shell's renewable energy sectors recently quit in response to the company's lackluster efforts to decarbonize.[179] The company is actively fighting a ruling by a Dutch court compelling it to adopt a science-based decarbonization plan.[180]
    - ExxonMobil is spending $21 million per day on capital expenditures misaligned with a net-zero pathway—projects that analysts have termed "carbon bombs."[181] In 2023, Exxon abandoned its biofuels research, which it had long used as evidence of its climate commitments.[182] And, just this month, the company agreed to buy Pioneer Natural Resources for $60 billion, "a bet that U.S. energy policy will not move against fossil fuels in a major way."[183]
    - In 2021, Chevron's CEO confirmed that "the company prefers to return money to its shareholders rather than use it to invest in solar and wind power projects," and suggested that shareholders concerned about emissions "plant trees" instead.[184] In 2022, Chevron announced a significant expansion of its capital expenditures on fossil fuels.[185]
    - In 2023, ConocoPhillips won approval for Willow, a massive drilling project that "has the potential to produce 180,000 barrels of oil per day."[186]

Fossil fuel companies seek to deny and undermine regulatory pressure and reject alternative, more sustainable business models.

- Shareholder engagement has not been an effective tactic for changing the industry's core business model. Recent attempts by shareholders to persuade fossil fuel companies to address climate risks have mostly failed.
    - The Interfaith Center on Corporate Responsibility found that "150 requests from various responsible shareholders asking fossil fuel companies to evaluate financial risk from climate change regulation [between 1992 and 2015] were

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[177] Evan Halper & Aaron Gregg, BP dials back climate pledge amid soaring oil profits, Washington Post (Feb. 3, 2022).
[178] Lottie Limb, Shell joins BP and Total in U-turning on climate pledges 'to reward shareholders', EuroNews (June 15, 2023).
[179] Anjli Raval & Leslie Hook, Shell Executives Quit Amid Discord Over Green Push, Financial Times (Dec. 8, 2020).
[180] Shell filed appeal against landmark Dutch climate ruling, Reuters (Mar. 29, 2022).
[181] Damien Carrington & Mathew Taylor, Revealed: the 'carbon bombs' set to trigger catastrophic climate breakdown, The Guardian (May 11, 2022).
[182] Kate Yoder, Why are BP, Shell, and Exxon suddenly backing off their climate promises?, Grist (Feb. 16, 2023).
[183] Clifford Kraus, Exxon Mobil Strikes $60 Billion Deal for Shale Giant, The New York Times (Oct. 11, 2023).
[184] Chevron would rather pay dividends than invest in wind and solar -CEO, Reuters (Sept. 15, 2021).
[185] Sabrina Valle, UPDATE 3-Chevron raises 2023 project spending budget to $17 bln, Reuters (Dec. 7, 2022).
[186] Joe Hernandez, The Biden administration approves the controversial Willow drilling project in Alaska, NPR (March 13, 2022).

ignored or met with a dismissive reply," with leaders of companies including ExxonMobil and Shell explicitly stating their intentions to continue producing fossil fuels without interruption.[187]

  - Shareholder engagement group As You Sow noted in a 2018 report that, although oil and gas companies are disproportionate targets of shareholders' attempts to engage and intervene, these companies have been singularly unresponsive to requests to reduce greenhouse gas emissions.[188]
  - A Cambridge University report found in 2021 that "[b]y any threshold one could devise as to the efficacy of a tactic for action on climate change and other social and environmental issues, it would be difficult to deem shareholder engagement a success."[189]
  - Even the most aggressive active ownership strategy to date—Engine No. 1's 2021 proxy fight for Exxon—"has not made a discernible difference in the way Exxon is addressing climate change."[190]
  - Financial industry standard-setters have suggested that if an institution wishes to practice shareholder engagement, best practice requires that this be in addition to — not in place of — a fossil fuel divestment plan.[191] This is because shareholder engagement, at least by itself, is not an adequate tool for addressing climate risk: "While the tactic has proven itself viable in changing business practices, there's little precedent of it successfully changing business models…. When the business model is the primary source of risk, an engagement-only strategy is the wrong tool for the job."[192]
  - The Church of England recently announced plans to divest its remaining shares in oil and gas majors after years of failed progress on shareholder engagement. In its announcement, a Church official said, "There is a significant misalignment between the long term interests of our pension fund and continued investment in companies seeking short term profit maximisation at the expense of the ambition needed to achieve the goals of the Paris Agreement."[193]
- Fossil fuel companies continue to undermine climate-friendly policymaking.

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[187] Taavi Tillmann, Jonny Currie, Alistair Wardrobe, & David McCoy, Fossil fuel companies and climate change: the case for divestment, 350 Brit. Med. J. (June 2015).
[188] 2020: A Clear Vision for Paris-Compliant Shareholder Engagement, As You Sow (Sept. 2018). The report urges fiduciaries to divest from the oil and gas sector so as to "protect their beneficiaries" if the companies do not adopt Paris-compliant plans by the close of the 2020 proxy season. *Id.* at 25. That deadline has now passed without any meaningful change of course by the industry. Raval, Big fossil fuel groups all failing, *supra* at note 169.
[189] Ellen Quigley, Emily Bugden, & Anthony Odgers, Divestment: Advantages and Disadvantages for the University of Cambridge (2021).
[190] Andrew Ross Sorkin, *et al.*, Reassessing the Board Fight That Was Meant to Transform Exxon, The New York Times (May 31, 2023). *See also* Tom Sanzillo, Months after tumultuous ExxonMobil annual meeting, no substantial change expected, Institute for Energy Economics and Financial Analysis (Aug. 6, 2021).
[191] For instance, the Science Based Target Initiative's draft standards for fossil fuel finance note that an asset manager must be willing to phase out holdings in companies "unable or unwilling to follow a 1.5°C transition within a pre-defined timeframe." Fossil Fuel Finance Position Paper (Consultation Draft) at 3, Science Based Targets Initiative (June 2023).
[192] Joshua Doh & Connor Chung, Divesting, Engaging, and the Problem with Fossil Fuels, ESGClarity (Mar. 16, 2022).
[193] Church of England Pensions Board disinvests from Shell and remaining oil and gas holdings, The Church of England (June 22, 2023).

    - In the three years following the Paris Agreement, the five largest public fossil fuel companies "invested over $1 [billion] of shareholder funds on misleading climate-related branding and lobbying."[194]
    - Each year, "the world's five largest publicly owned oil and gas companies spend approximately $200 million on lobbying designed to control, delay or block binding climate-motivated policy."[195]
    - In 2018, the fossil fuel industry spent nearly $100 million to stymie three proposed climate initiatives in Western states: a carbon emissions fee in Washington, restrictions on hydraulic fracturing in Colorado, and improved renewable energy standards in Arizona.[196]
- As a 2013 article by environmental sociologists explained: "[a]lthough many factors have contributed to the failure to enact strong international and national climate change policies… a powerful and sustained effort to deny the reality and significance of human-induced climate change has been a key factor."[197]
- Finally, the fossil fuel industry has engaged in a sustained effort to silence climate protesters and increase the severity of criminal punishment for their activities.
    - Since 2017, the industry has pushed for the passage of numerous "critical infrastructure" bills in U.S. state legislatures, thirteen of which have become law.[198] Many of the bills are similar or identical to model legislation authored by the corporate lobbying group American Legislative Exchange Council, and at least three were accompanied by political contributions from oil and gas companies to the bills' sponsors.[199]
        - A recent report found that sixty percent of U.S. oil and gas infrastructure is located in states that have enacted critical infrastructure laws.[200]
        - A wide range of commentators have criticized critical infrastructure laws as unnecessary, vague, and overly punitive, and some have been challenged in court as unconstitutional.[201]

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[194] Big Oil's Real Agenda on Climate Change, InfluenceMap (Mar. 2019).
[195] Niall McCarthy, Oil and Gas Giants Spend Millions Lobbying to Block Climate Change Policies, Forbes (Mar. 25, 2019). BP spends approximately $53 million, Shell $49 million, and ExxonMobil $29 million per year. *Id.*
[196] Amy Harder, With deep pockets, energy industry notches big midterm wins, Axios (Nov. 7, 2018).
[197] Shaun W. Elsasser & Riley E. Dunlap, Leading Voices in the Conservative Choir: Conservative Columnists' Dismissal of Global Warming and Denigration of Climate Science, 57(6) Am. Behav. Scientist 754, 755 (2013).
[198] Institute for Policy Studies, Muzzling Dissent: How Corporate Influence Over Politics Has Fueled Anti-Protest Laws (Oct. 2020). The states in which bills have passed into law are Indiana, Kentucky, Louisiana, Mississippi, Missouri, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, Texas, West Virginia, and Wisconsin. US Protest Law Tracker, International Center for Not-for-Profit Law (last visited Feb. 10, 2021).
[199] New Report Details Impact of Secretive American Legislative Exchange Council on Communities of Color, Center for Constitutional Rights (Dec. 23, 2019); Gabrielle Cochette & Basav Sen, Muzzling Dissent: How Corporate Influence Over Politics Has Fueled Anti-Protest Laws at 8-9, Institute for Policy Studies (Oct. 2020).
[200] Dollars vs. Democracy: Inside the Fossil Fuel Industry's Playbook to Suppress Protest and Dissent in the United States, Greenpeace (2023).
[201] Nicholas Kusnetz, More States Crack Down on Pipeline Protesters, Including Supporters Who Aren't Even on the Scene, Inside Climate News (Mar. 28, 2019); Susie Cagle, 'Protesters as terrorists': growing number of states turn anti-pipeline activism into a crime, The Guardian (July 8, 2019).

- The industry has also used lawsuits and subpoenas to accuse environmental advocates of defamation, racketeering, and other crimes, to label advocates as terrorists, and to chill advocacy targeting the industry's activities.[202]

E. The Board and Investment Council have failed to adequately consider changing investment practice.

Hundreds of large institutional investors have opted in recent years to divest from fossil producers, including many universities situated similarly to Penn State. Best practices are changing, and Penn State has not made any plans to follow suit, failing to invest with the care that an ordinarily prudent person in a similar position would exercise under similar circumstances.

- Institutional divestment from the fossil fuel industry has become increasingly common. More than 1,500 institutional investors have committed to divestment from fossil fuels, including major institutional investors.[203] In so doing, they have recognized divestment as a fiduciarily responsible course of action.[204]
- BlackRock's recent reports to the City of New York note that although fossil fuel divestment was initiated by small, religious investors and non-profit organizations, its financial logic has been validated by globally significant financial institutions as larger funds have begun divesting from fossil fuels.[205] This group of institutions includes significant universities, insurance companies, foundations, and major asset managers.[206]
- Although investor discontent with an industry typically recedes during periods of rising prices and profitability, major institutional investors continued divesting from fossil fuels throughout 2021 and 2022:
    - In April 2021, the New York State Comptroller announced divestment from major oil sands companies after probing the sector's lack of preparation for the energy transition.[207] In February 2022, the New York State Comptroller announced divestment from major shale oil and gas companies after probing the companies' readiness for the energy transition.[208]

[202] *See, e.g.*, Amal Ahmed, Energy Transfer Partners Files Lawsuit Against Greenpeace, Texas Monthly (Dec. 15, 2017); Exxon's Campaign of Intimidation against Climate Defenders Ushers in a New McCarthy Era, EarthRights International (Dec. 21, 2016); Green Group Holdings v. Schaeffer: Defense of Environmental Protesters Against Defamation Lawsuit, American Civil Liberties Union (Feb. 7, 2017). A national coalition of civil rights organizations called Protect the Protest tracks and opposes these tactics.
[203] Global Fossil Fuel Divestment Commitments Database, Stand.earth (last accessed Aug. 15, 2022).
[204] *See, e.g.*, Update to the Legislature Regarding NYSTRS' Deliberative Process to Address Climate Risk and Opportunities, New York State Teachers' Retirement System (Dec. 28, 2021) (discussing at length the relationship between climate-conscious investment and fiduciary duty).
[205] BlackRock, Investment and Fiduciary Analysis for Potential Fossil Fuel Divestment, Phase 1: Survey of Divestments of Fossil Fuel Reserve Owners and Identification of Securities Issued by Fossil Fuel Reserve Owners at 5 (Mar. 2021).
[206] *See* Invest Divest 2021: A Decade of Progress Towards a Just Climate Future, DivestInvest.org (Oct. 2021); 100 and Counting: Financial institutions are restricting fossil fuel funding, Institute for Energy Economics and Financial Analysis (last accessed Aug. 15, 2022).
[207] Office of the New York State Comptroller, DiNapoli Moves State Pension Fund Toward Net Zero Target, Restricts Investments in Oil Sands Companies (April 12, 2021).
[208] Office of the New York State Comptroller, DiNapoli Restricts Investments in 21 Shale Oil & Gas Companies (February 9, 2022).

- In September 2021, Harvard University President Lawrence Bacow announced the school would divest its endowment of fossil fuels.[209]
- In October 2021, the Ford Foundation made a similar commitment.[210]
- In July 2022, commissioners at a general assembly of the Presbyterian Church (U.S.A.) voted to divest from five oil companies.[211] The same month, other churches from seven countries and multiple denominations jointly announced their divestment from fossil fuel companies.[212]
- Later in July 2022, the United Kingdom's Wellcome Trust, a major philanthropic funder of health-related scientific research, quietly announced that it had divested from large fossil fuel companies such as BP and Shell.[213]

- Many institutions have pointed to the moral and financial imperative of abandoning holdings in oil, gas, and coal, and there is broad consensus that fossil fuel divestment is both necessary and effective as a means of mitigating climate disaster.[214]
  - Institutional investment in fossil fuel firms "provid[es] [those firms] with the capital to continue oil and gas production, to persuade members of Congress to provide industry-specific tax breaks and other favors, and to thwart carbon taxes and new public-transportation projects and other policies — actions that ultimately delay the transition from the greenhouse gas-emitting fuels."[215]
  - In its lawsuit against ExxonMobil, the Massachusetts Attorney General concluded that institutional divestment is effective in reducing the fossil fuel industry's harmful effects on the climate: "Insofar as they damage companies' reputations for their social responsibility and environmental stewardship, and thus their societal 'license to operate,' divestment efforts pose an additional climate-related risk to oil and gas companies. In 2018, an oil major that competes with ExxonMobil acknowledged that divestment campaigns and related efforts pose a material risk to its business and the price of its securities."[216]
    - The Attorney General was referencing an investor disclosure by Shell, in which the company stated that the divestment movement "could have a material adverse effect on the price of our securities and our ability to access equity capital markets . . . other financial institutions also appear to be considering limiting their exposure to certain fossil fuel projects.

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[209] Lawrence Bacow, Climate Change: Update on Harvard Actions, Harvard Office of the President (Sept. 9, 2021).
[210] Darren Walker, Aligning our investments and our values, Ford Foundation (Oct. 18, 2021).
[211] Darla Carter, GA committee approves MRTI's fossil fuel divestment proposal, Presbyterian Church (U.S.A.) (July 6, 2022). *See also* Bob Smietana, Presbyterians to divest from 5 oil companies, including Exxon Mobil, after years of debate, Religion News Service (July 7, 2022).
[212] Operation Noah, Global faith institutions announce divestment as oil and gas companies threaten 1.5°C climate goal with reckless expansion plans (July 5, 2022).
[213] Jim Waterson & Damian Carrington, Wellcome Trust sells stakes in large oil and mining companies, The Guardian (July 21, 2022).
[214] *See, e.g.*, How falling demand for oil is set to transform international relations, World Economic Forum (Aug. 20, 2019) (citing the "global campaign in support of divestment from fossil fuels" as one of the key factors in the ongoing energy transition worldwide); Gunther Thallinger, The zero that every investment portfolio needs, World Economic Forum (Jan. 14, 2021) ("To address climate change effectively, investors must steer their entire portfolios towards climate neutrality. . . . [I]t could become necessary to reduce assets with a non-satisfactory sustainability approach. In the extreme case of non-existence of such approaches, divestment is the ultima ratio.").
[215] Prem Thakkar, Reading the Fine Print of University Fossil Fuel Divestment Pledges, The American Prospect (Mar. 1, 2021).
[216] Second Amended Complaint, Massachusetts v. ExxonMobil, *supra* at note 135, at 108-09.

Accordingly, our ability to use financing for future projects may be adversely impacted."[217]

        - Other fossil fuel companies have likewise acknowledged the effects of investors' decisions to pull their funds: Prior to its bankruptcy declaration, for example, Peabody Energy stated in SEC filings that "[t]here have also been efforts in recent years affecting the investment community, including investment advisors, sovereign wealth funds, public pension funds, universities and other groups, promoting the divestment of fossil fuel equities and also pressuring lenders to limit funding to companies engaged in the extraction of fossil fuel reserves. The impact of such efforts may adversely affect the demand for and price of securities issued by us, and impact our access to the capital and financial markets."[218]
    - In addition to "hasten[ing] the [fossil fuel] industry's decline," divestment commitments from large institutions create pressure on governments to take action and make political space for the shift away from fossil fuels."[219]

Many of Penn State's peer educational institutions have pledged to abandon their fossil fuel assets in recognition of changing best-investment practices.

- On September 29, 2022, Princeton University's Board of Trustees voted to dissociate from 90 fossil fuel companies, including ExxonMobil, NRG Energy, Total, Suncor, and Syncrude.[220] The companies dissociated from were identified as responsible for some of the most-polluting segments of the fossil fuel industry and were involved in corporate climate disinformation campaigns. The decision ended not only investments but also research funding and other associations between the university and the companies identified. Princeton also created a fund to support funding needs for energy research as a result of the dissociation. Princeton University President Christopher Eisgruber said of the decision, "Princeton will have the most significant impact on the climate crisis through the scholarship we generate and the people we educate."[221]
- On October 8, 2021, Dartmouth College announced that the Dartmouth Investment Office would let its remaining public investments in the fossil fuel industry expire.[222] Dartmouth President Phil Hanlon said the College noticed that "investments in energy transitions are now comparable or better than the investment opportunities in fossil fuel companies."[223]

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[217] Royal Dutch Shell PLC, Annual Report and Form 20-F 2017 — Strategic Report at 13 (2017).
[218] Peabody Energy Corporation, Form 10-K: Annual Report at 30 (2014).
[219] Emma Howard, A beginner's guide to fossil fuel divestment, The Guardian (Jun. 23, 2015) (quoting Jamie Henn, of 350.org, who explains that institutional divestment commitments "hasten the [fossil fuel] industry's decline and help push governments to take action," while also serving to stigmatise fossil fuel companies in order to "make the space for progress" and reduce those companies' corrupting influence on politics).
[220] Princeton University, Fossil Fuel Dissociation (Sept. 29, 2022).
[221] *Id.*
[222] Office of Communications, Darmouth Taking Formal Steps to Address Climate Crisis, Dartmouth College (Oct. 8, 2021).
[223] Taylor Haber, College formally announces plan to divest from fossil fuels, The Dartmouth (Oct. 8, 2021).

- On October 6, 2021, California State University System, the largest in the US, announced that the system would no longer invest in fossil fuels.[224] The California State University Chancellor said that "it is an appropriate time to start to transition away from these types of investments . . . to ensure strong future returns on the funds invested by the university."[225]
- On September 23, 2021, Boston University announced that it would fully divest from fossil fuels as part of an overarching climate action strategy.[226] President Robert Brown stated that the decision was motivated by an urgently worded climate report released by the Intergovernmental Panel on Climate Change in 2021, and said that "we face the challenge of changing our way of life at unprecedented speed."[227]
- On September 9, 2021, Harvard University divested from fossil fuels.[228] President Lawrence Bacow stated: "Given the need to decarbonize the economy and our responsibility as fiduciaries to make long-term investment decisions that support our teaching and research mission, we do not believe such investments are prudent."[229]
- In January 2021, Columbia University announced that it did not hold any direct investments in publicly traded oil and gas companies, and was formalizing this policy of non-investment for the foreseeable future. "There is an undeniable obligation binding upon Columbia and other universities to confront the climate crisis across every dimension of our institutions," said Columbia University President Lee C. Bollinger.
- In March 2020, Brown University made public that it had begun selling its investments in fossil fuel extraction companies in October 2017. Brown's president Christina Paxson wrote in a letter to the Brown community, "as the world shifts to sustainable energy sources, investments in fossil fuels carry too much long-term financial risk."[230]
- On May 22, 2020, the Cornell University Board of Trustees announced a moratorium on new private investments focused on fossil fuels and a phase-out of existing investments in that area, effectively divesting the endowment from the fossil fuel industry.[231] "We're doing the right thing from an investment perspective, particularly for an endowment with a perpetual time horizon" said Ken Miranda, the university's chief investment officer, in a Cornell press release.[232]
- On October 1, 2020, the University of Cambridge announced plans to divest all direct and indirect holdings from the fossil fuel industry and to achieve net-zero greenhouse gas emissions by 2038.[233] "The University is responding comprehensively to a pressing environmental and moral need for action with an historic announcement that

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[224] California State University Will Not Make Future Fossil Fuel Investments in University Investment Portfolios and Funds, The California State University (Oct. 6, 2021).
[225] Id.
[226] Robert A. Brown, Board of Trustees Approves Fossil Fuel Divestment Policy, Boston University (Sept. 23, 2021).
[227] *Id.*
[228] Anemona Hartocollis, Harvard Says It Will Not Invest In Fossil Fuels, The New York Times (Sept. 10, 2021).
[229] Harvard Office of the President, Harvard University (last visited Jan. 27, 2022).
[230] Christina Paxson, Letter from President Paxson: Brown's actions on climate change, Brown University (Mar. 4, 2020).
[231] Kathryn Stamm, Cornell to Effectively Divest from Fossil Fuels, Trustees Vote, Cornell Daily Sun (May 22, 2020).
[232] James Dean, Cornell announces moratorium on fossil fuel investments, Cornell Chronicle (May 22, 2020).
[233] Matthew Taylor, Cambridge University to divest from fossil fuels by 2030, The Guardian (Oct. 1, 2020).

demonstrates our determination to seek solutions to the climate crisis," said Stephen Toope, the university's vice-chancellor.[234]

- In April 2020, the University of Oxford announced plans to divest its endowment from fossil fuel companies.[235]
  - Oxford's divestment decision was made in accordance with its Oxford Martin Principles for Climate-Conscious Investment, a set of guidelines that led the university to determine that fossil fuel investments "hinder" worldwide efforts to (1) bring CO2 emissions to zero and (2) limit global warming to 1.5 degrees Celsius.[236]
  - While some universities have insisted on "shareholder engagement" *instead of* divestment, Oxford chose to pursue both strategies, divesting from fossil fuel companies while also pledging to work with companies around the world, "helping them assess whether investments are compatible with transition to a more stable climate and the goals of the Paris Agreement on climate change." Oxford also plans to engage with fund managers "to request evidence of net-zero carbon business plans across their portfolios."[237]
- In February 2020, Georgetown University announced the divestment of its endowment from all public and private fossil fuel assets.[238] In its announcement, Georgetown stressed the financial risk of continued investment, with Michael Barry, Georgetown's chief investment officer, noting that "climate change, in addition to threatening our planet, is increasing the risk of investing in oil and gas companies, as we expect a more volatile range of financial outcomes."[239]
- In September 2019, the University of California system announced divestment of its over eighty-three billion dollar endowment and pension fund from fossil fuels.[240] Fund managers cited their fiduciary duty to the long-term financial wellbeing of the institution, writing that "[t]he reason we sold some $150 million in fossil fuel assets from our endowment was the reason we sell other assets: They posed a long-term risk to generating strong returns for UC's diversified portfolios."[241]
- Aside from peer universities, many other large-scale charitable funds with analogous fiduciary duties have divested.
  - Pension funds that have divested from fossil fuels include the California Public Employees' Retirement System (coal), the California State Teachers' Retirement System (coal), the country of Ireland, the New York City Employees Retirement System, the New York State Common Retirement Fund, the Teachers Retirement

[234] Cambridge to divest from fossil fuels with 'net zero' plan, University of Cambridge (Oct. 1, 2020).

[235] University of Oxford cuts ties to fossil fuels industry, BBC News (Apr. 28, 2020).

[236] Oxford Martin Principles for Climate-Conscious Investment, Oxford Martin Net Zero Carbon Investment Initiative (Feb. 2018) (adapted from R.J. Millar, C. Hepburn, J. Beddington, J., & M.R. Allen, Principles to guide investment towards a stable climate, 8 Nature Climate Change 2-4 (2018)).

[237] Oxford announces historic commitment to fossil fuel divestment, University of Oxford (Apr. 27, 2020).

[238] Fossil Fuels Divestment Continues Georgetown's Commitment to Sustainability, Georgetown University (Feb. 6, 2020).

[239] *Id.*

[240] Jagdeep Singh Baccher & Richard Sherman, Opinion: UC investments are going fossil free. But not exactly for the reasons you may think, The Los Angeles Times (Sept. 17, 2019).

[241] *Id.*

System of the City of New York, and the City of Providence, Rhode Island (partial).[242] In September 2021, the Caisse de dépôt et placement du Québec—Canada's second-biggest pension fund at 310 billion dollars—announced it was divesting from oil production investments by the end of 2022.[243]

- In the fall of 2021, two of America's largest and most prestigious foundations announced their divestment from fossil fuels. The MacArthur Foundation announced that it was divesting from fossil fuels, citing a number of reasons including fiduciary duty.[244] Shortly after, the Ford Foundation announced it was divesting its thirteen billion dollar endowment from fossil fuels.[245] The foundation president apologized for not having divested sooner.[246]
- Other major funds that have divested include the five-billion-dollar Rockefeller Foundation,[247] Norway's 1.1 trillion dollar sovereign wealth fund (oil and gas exploration and production)[248] and the ninety-billion Storebrand hedge fund (ExxonMobil, Chevron, and other environmental bad actors).[249]

Fossil fuel divestment poses no risk to a portfolio's diversity and flexibility, nor does it impact returns.

- More than 1,500 institutional investors have committed to divest from fossil fuels, including major institutional investors who have recognized divestment as a fiduciarily responsible course of action.[250]
- Two major financial management firms, BlackRock and Meketa, have separately concluded that investment funds have experienced no negative financial impacts from divesting from fossil fuels. Instead, they found evidence that divestment is neutral or marginally improves returns.[251] BlackRock's report to the City of New York takes note of the fact that, while public campaigns for fossil fuel divestment were initiated by small, religious investors and non-profit organizations,[252] the financial logic of divestment has been validated by large financial institutions,[253] including significant universities, insurance companies, foundations, and major asset managers.[254]
- A 2018 London School of Economics analysis led by Jeremy Grantham, one of the world's leading asset managers, concluded that removing any one of ten major asset

[242] 1000+ Divestment Commitments, GoFossilFree.org (updated Dec. 9, 2020).
[243] CDPQ announces its new climate strategy, Caisse de dépôt et placement du Québec (Sept. 28, 2021).
[244] Our Approach toAchieving Impact with Investment Assets, MacArthur Foundation (Sept. 22, 2021).
[245] Darren Walker, Aligning our investments and our value, Ford Foundation (Oct. 18, 2021).
[246] InvestDivest 2021 Event Video, DivestInvest (last visited Jan. 27, 2022).
[247] *Id.*
[248] Terje Solsvik, Norway sovereign wealth fund to divest oil explorers, keep refiners, Reuters (Oct. 1, 2019).
[249] Jillian Ambrose, Major investment firm dumps Exxon, Chevron and Rio Tinto stock, The Guardian (Aug. 24, 2020).
[250] Stand.earth, Global Fossil Fuel Divestment Commitments Database (last visited Sept. 14, 2023).
[251] Tom Sanzillo, IEEFA: Major investment advisors BlackRock and Meketa provide a fiduciary path through the energy transition, Institute for Energy Economics and Financial Analysis (Mar. 22, 2021).
[252] *Id.*
[253] 200 and counting: Global financial institutions are exiting coal, Institute for Energy Economics and Financial Analysis (May 4, 2023).
[254] Invest Divest 2021: A Decade of Progress Towards a Just Climate Future, DivestInvest.org (Oct. 2021).

classes such as technology or utilities from a portfolio produced no discernible impact on overall long-term returns. The analysis states that the purported financial peril of fossil fuel divestment was “mythical,” and that “[i]nvestors with long-term horizons should avoid oil . . . on investment grounds.”[255]

- Divestment from fossil fuels does not threaten the profitability of invested funds and, as such, does not violate a fiduciary’s duty to ensure the prudent management of an endowment. In recent years, investment portfolios lacking fossil fuel holdings have matched or outperformed funds containing them.
    - The most comprehensive study to date of the endowment performance at universities that have divested from fossil fuels concludes that divestment does not have a negative effect on investment returns.[256] Other research indicates that fossil fuel divestment does not significantly limit portfolio diversification opportunities, allowing investors to satisfy their fiduciary duty to maintain balanced holdings even as they avoid the risks posed by stranded assets and the energy transition.[257]
    - A 2019 study of university endowments with “socially responsible investment” [SRI] policies concludes that such policies benefit universities. Surveying SRI endowment returns from 2010 to 2019, the study reports that “donations are 33.3% per year higher among universities that incorporate SRI policies into their endowments” and that “SRI policies predict greater university donations, higher student enrollment, and more extensive risk management practices by the endowment fund.”[258]
    - In 2020, the financial research agency Morningstar reported that European sustainable investment funds — defined as “funds that use environmental, social, and governance criteria as a key part of their security selection and portfolio-construction process, and/or indicate that they pursue a sustainability-related theme, and/or seek a measurable positive impact alongside financial return” — had outperformed traditional funds over the past ten years, generally posting higher returns and surviving longer than traditional funds.
    - Comparing more recent MSCI indexes corroborates Morningstar’s reporting. Indexes assigned by MCSI to have high Environmental, Social, and Governance (ESG) scores “were resilient [in 2021], outperforming the parent MSCI ACWI Index for the second year in a row, even though market conditions were very different [across the two years].”[259]
        - MSCI’s research team reported a correlation between higher ESG scores and financial performance during the turbulent FY 2020. “All ESG indexes outperformed the “parent” MSCI ACWI index by the end of 2020.

[255] Jeremy Grantham, The mythical peril of divesting from fossil fuels, London School of Economics (June 13, 2018).
[256] Christopher Ryan & Christopher Mariscano, Examining the Impact of Divestment from Fossil Fuels on University Endowments, 17 NYU J. L. and Business, Roger Williams Univ. L. Studies Paper No. 195 (June 23, 2020).
[257] Auke Plantinga and Bert Scholtens, The financial impact of fossil fuel divestment, 21 Climate Policy 1 (2020).
[258] George O. Aragon, Yuxiang Jiang, Juha Joenväärä, and Cristian Ioan Tiu, Socially Responsible Investments: Costs and Benefits for University Endowment Funds at 5 (July 21, 2020).
[259] Yuliya Plyakha Ferenc, Despite Oil & Gas’s Rebound, ESG Indexes Outperformed, MCSI (Jan. 28, 2022).

In fact, splitting the FY 2020 into slump and rally periods for the financial market, ESG indexes 'outperformed during both.'" Notably, both concentrations of ESG scores and the average ESG scores for the indexes predicted the relationship.[260]

        - Indexes with higher ESG scores experienced lower volatility during FY 2020. While reduced volatility "impaired performance during the rally," it also "provided a 'protective' effect during the slump" that ultimately led ESG indexes to outperform by the end of the year.[261]

    - A 2018 analysis concluded that the New York State Common Retirement Fund would have earned an additional 22.2 billion dollars (137 billion dollars versus 114.8 billion dollars) from 2008 to 2018 had it divested from fossil fuels.[262]

- In a sign of the growing consensus that fund managers have a duty to assess climate risks in their portfolios, the multibillion-dollar Australian Retail Employees Superannuation Trust (REST) recently settled a beneficiary lawsuit that faulted the fund for failing to disclose how it would manage the risks posed by climate change and the plummeting value of fossil fuel stocks. REST acknowledged that "climate change is a material, direct and current financial risk" and committed to manage its investments in a way that would support net-zero greenhouse gas emissions by 2050 and the Paris Agreement goal of 1.5 degrees Celsius warming.[263]
- Elevated commodity prices for oil and gas in 2021 and 2022 do not justify continued portfolio holdings in the fossil fuel industry. Although high commodity prices have driven rising profits and stock valuations for energy companies, the main causes of current high prices are the debottlenecking supply chains from the pandemic,[264] along with Russia's invasion of Ukraine.[265] These are not investable events, as they cannot be relied upon to reoccur in the future. In fact, elevated prices and the weaponization of fossil fuel energy are undermining forecasted future demand for fossil fuels in Asia and Europe.[266]

IV. The Board and Investment Council have failed to act with due care by refusing to engage with Penn State students, faculty, and community members who have sought to align the University's investment practices with its charitable mission.

Members of the Penn State community have repeatedly asked the Penn State Investment Council and Board of Trustees to consider fossil fuel risks.

[260] Yuliya Plyakha Ferenc, ESG Indexes Through the Slump and Rally of 2020 at 1, MSCI (Mar. 2021).
[261] *Id.*, at 2.
[262] Toby A.A. Heaps, Divestment would have made NY pension fund $22B richer, Corporate Knights (Oct. 4, 2018).
[263] Michael Slezak, Rest super fund commits to net-zero emission investments after Brisbane man sues, ABC News (Nov. 2, 2020).
[264] David Gaffen, Analysis: Oil's journey from worthless in the pandemic to $100 a barrel, Reuters (Feb. 24, 2022).
[265] Kevin Dobbs, Natural Gas, Oil Prices Soar as Russia Attacks Ukraine, Creating Potential Supply Headwinds, Natural Gas Intel (Feb. 24, 2022). *See also*: Russian supplies to global energy markets, International Energy Agency (Feb. 2022).
[266] Shafiqul Alam, *et al.*, Global LNG Outlook 2023-27, Institute for Energy Economics and Financial Analysis (Feb. 15, 2023).

- In spring 2014, Penn State students founded Fossil Free PSU.[267]
- In December 2014, Fossil Free PSU rallied in support of divestment outside of Penn State's primary administrative building and delivered bags of coal for members of the University's Board of Trustees.[268]
- In October 2015, the Council of Commonwealth Student Governments called on Penn State to "take the path of divestment from fossil fuels."[269]
- In fall 2020, the Penn State Climate Action Coalition launched a petition for full divestment from fossil fuels. The petition garnered over 2,100 signatures by the end of spring 2021.[270]
- On March 18, 2021, the University Park Undergraduate Association, representing students at Penn State's main campus at University Park, PA, called on Penn State to completely divest its endowment from fossil fuels.[271]
- On March 31, 2021, undergraduates at University Park voted to call on the administration to "commit to divestment from its long-term holdings in fossil fuel asset classes as quickly as possible," with 91% in favor.[272]
- In April 2021, Penn State's primary student newspaper, *The Daily Collegian*, endorsed fossil fuel divestment.[273]
- In summer 2021, Penn State University Park's Student Fee Board implemented an $250,000 Environmental Sustainability Fund, which student members hoped would prompt "other, similar changes across the University."[274]
- In spring 2022, Penn State alumni elected atmospheric scientist Dr. Christa Hasenkopf to the University's Board of Trustees on a climate action platform.[275]
- In summer 2022, Penn State unveiled a University-endorsed Carbon Emissions Reduction Task Force report which stated that "climate smart" investing was a "next step" in the University's climate action efforts.[276]
- On November 21, 2022, Penn State's oldest environmental organization, EcoAction, delivered a public comment before the Board of Trustees calling for full divestment from fossil fuels.[277]
- In spring 2023, Penn State alumni elected another climate action candidate, Ali Krieger, to the University's governing Board of Trustees.[278]

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[267] Fossil Free Penn State: About, Weebly (last accessed Oct. 9, 2023).
[268] Lori Falce, Fossil Free PSU student group delivers coal to board of trustees, Centre Daily Times (Dec. 13, 2014).
[269] C.R. 15-16.05: In Support of Fossil Fuel Divestment, Council of Commonwealth Student Governments (Dec. 5, 2015).
[270] Penn State Climate Action: Sign the Petition, Weebly (last accessed Oct. 9, 2023).
[271] James Engel, UPUA calls on Penn State to halt all fossil fuel investment, reinvest in renewables, Daily Collegian (Mar. 18, 2021).
[272] James Engel, Penn State students vote 'yes' on referendum calling on university to divest from fossil fuels, Daily Collegian (Mar. 31, 2021).
[273] Daily Collegian Editorial Board, Divestment from fossil fuels should be augmented with other plans for a greener Penn State, Daily Collegian (Apr. 21, 2021).
[274] Matthew Long, University Park Student Fee Board approves new $250k Sustainability Fund, Penn State News (Aug. 10, 2021).
[275] Kimberly M.S. Cartier, Alumni Push Universities Forward on Climate, Eos (Nov. 21, 2022).
[276] For the Future: A Report from the President's Carbon Emissions Task Force at 87–88, Penn State (Dec. 2021).
[277] Public Comment at 1–2, Penn State Board of Trustees (Nov. 11, 2022).
[278] Mark Wogenrich, Ali Krieger Elected to Penn State Board of Trustees, Sports Illustrated (May 9, 2023).

Despite the strong support for fossil fuel divestment among members of the Penn State community, the University has not engaged seriously with the community's concerns, violating the duty of loyalty.

- The University has purportedly subjected an exceptionally small proportion (4%) of its investments to a more sustainable investment strategy. In 2020, Penn State self-reported that the University invests about $175,000,000 with an "environmental, social and governance" strategy.[279] It did not disclose what firm the University uses, nor what specific considerations govern this strategy.
- In 2023, Penn State altered investment policy language.[280] But this language change did not influence policy.
    - As noted by a Board of Trustees member, "many . . . think [the language change] does not indicate any change at all to the existing investment policy."[281]
    - This perception was confirmed by student government leadership, who wrote that the University reported that "sustainable considerations were always a part of their decision-making processes when it came to investments" and that the policy change merely "affirm[ed] Penn State and specifically PSIC's commitment to environmental and social considerations."[282] Further, "hesitancies from trustees" prohibited a change more substantial than "vague" wording and a loose "commitment to work in that direction."[283]
- Concurrently, members of Penn State's Board of Trustees maintain financial and professional ties to the fossil fuel industry.
    - For instance, Board of Trustees member Terrence "Terry" Pegula is a self-made gas billionaire who has made deals with fossil fuel giants, including Shell. Pegula has made hundreds of thousands of dollars in political contributions to Pennsylvania politicians who created a regulatory environment advantageous to the growth of his personal wealth.[284]
    - Stanley Rapp, another Board of Trustees member, is a founding partner of the Pennsylvania lobbying firm Greenlee Partners, which represents a number of energy industry customers. Greenlee serves a number of fossil fuel companies, including CONSOL Energy, Energy Transfer Partners, NextEra Energy, NiSource, PPL, Range Resources, UGI.[285]
    - These conflicts are not reported in the Board of Trustees' Conflict of Interest Disclosures.[286]

Conclusion

[279] Pennsylvania State University, PA-10: Sustainable Investment, AASHE Stars Report (last accessed Oct. 9, 2023).
[280] Barry Fenchak, My comments – Penn State Board of Trustees Meeting, February 17 2023 (May 22, 2023).
[281] *Id.*
[282] Nora O'Toole, Projects That Worked Series: Aligning University Investments with the Culture Movement, University Park Undergraduate Association (last accessed Oct. 9, 2023).
[283] *Id.*
[284] Carlo E. Sica, Scales Over Shale: How Pennsylvania Got Fracked at 34, 41, Syracuse University (2013).
[285] Fracking and the Revolving Door in Pennsylvania at 25–26, Public Accountability Initiative (Feb. 2013).
[286] Conflict of Interest Disclosures, Summary Report, Penn State Board of Trustees (June 30, 2022).

By investing in fossil fuel assets, the Penn State Board of Trustees and Investment Council violate their duty of care, duty of loyalty, and fealty to the charitable purpose of the University's endowment. We ask that you investigate the violations described above and compel the leaders of Pennsylvania’s flagship university to recommit to the Commonwealth’s health and future.

Appendix A

Flood Risk Summary

Effective Flood Zone: X

Zone Sub Type: 0.2 PCT ANNUAL CHANCE FLOOD HAZARD

Address: Penn State-Abington
Watershed: Lower Delaware. New Jersey, Pennsylvania.
Stream: no data found
County: Montgomery
Municipality: Abington
Parcel ID: 300009792006
Ground Elevation (ft): 241

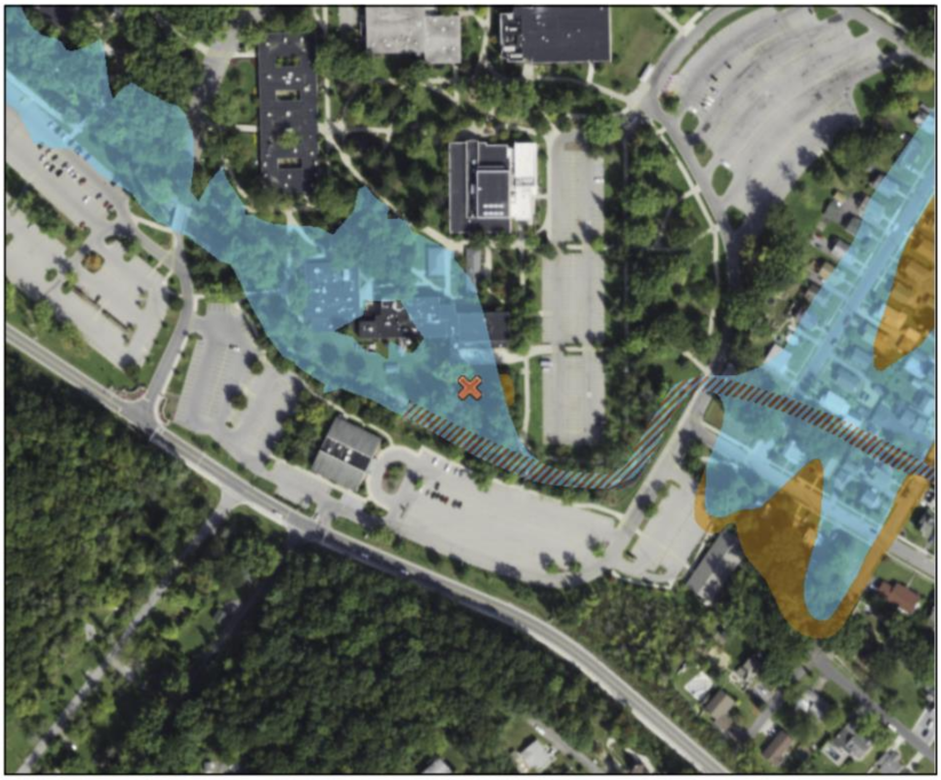
Flood report generated at pafloodrisk.psu.edu on 10/8/2023

This summary is provided for reference only. Consult official FEMA Flood Insurance Rate Maps (FIRMs) and certified elevation data if there is any doubt of a property's flood risk.

Effective Flood Zones:

- **1% Annual Chance Flood Hazard**
- **0.2% Annual Chance Flood Hazard**
- **Regulatory Floodway**
- **Area with Reduced Risk Due to Levee**

Flood Risk Summary



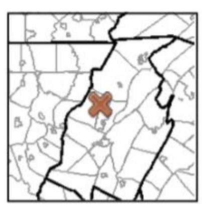
Effective Flood Zone: AE

Zone Sub Type:

Address: Penn State-Altoona
Watershed: Upper Juniata. Pennsylvania.
Stream: Little Juniata River
County: Blair
Municipality: Altoona
Parcel ID: 01.13-43..-001.00-000
Ground Elevation (ft): 1231

Flood report generated at pafloodrisk.psu.edu on 10/8/2023

This summary is provided for reference only. Consult official FEMA Flood Insurance Rate Maps (FIRMs) and certified elevation data if there is any doubt of a property's flood risk.



Effective Flood Zones:

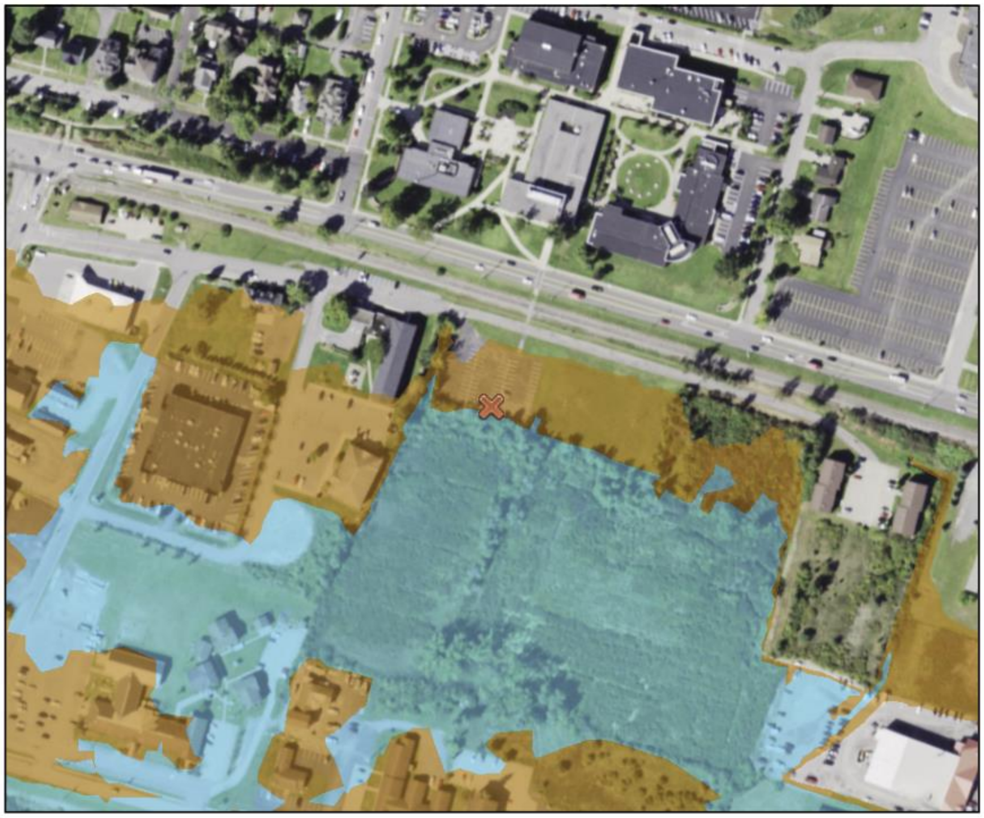
1% Annual Chance Flood Hazard

0.2% Annual Chance Flood Hazard

Regulatory Floodway

Area with Reduced Risk Due to Levee

Flood Risk Summary



Effective Flood Zone: X

Zone Sub Type: 0.2 PCT ANNUAL CHANCE FLOOD HAZARD

Address: 84-98 N Park Pl, Du Bois, Pennsylvania, 15801
Watershed: Middle Allegheny-Redbank. New York.
Stream:
County: Clearfield
Municipality: Dubois
Parcel ID: not available
Ground Elevation (ft): 1398

Flood report generated at pafloodrisk.psu.edu on 10/8/2023

This summary is provided for reference only. Consult official FEMA Flood Insurance Rate Maps (FIRMs) and certified elevation data if there is any doubt of a property's flood risk.

Effective Flood Zones:

- **1% Annual Chance Flood Hazard**
- **0.2% Annual Chance Flood Hazard**
- **Regulatory Floodway**
- **Area with Reduced Risk Due to Levee**

Flood Risk Summary

Effective Flood Zone: A

Zone Sub Type:

Address: 5527-5577 Orchard Rd, Fayetteville, Pennsylvania, 17222

Watershed: Conococheague-Opequon. MD, PA, VA, WV.

Stream: West Branch Antietam Creek

County: Franklin

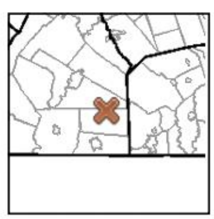
Municipality: Mont Alto

Parcel ID: 16-4A55.-002.-000000

Ground Elevation (ft): 940

Flood report generated at pafloodrisk.psu.edu on 10/8/2023

This summary is provided for reference only. Consult official FEMA Flood Insurance Rate Maps (FIRMs) and certified elevation data if there is any doubt of a property's flood risk.



Effective Flood Zones:

- **1% Annual Chance Flood Hazard**
- **0.2% Annual Chance Flood Hazard**
- **Regulatory Floodway**
- **Area with Reduced Risk Due to Levee**

Appendix B

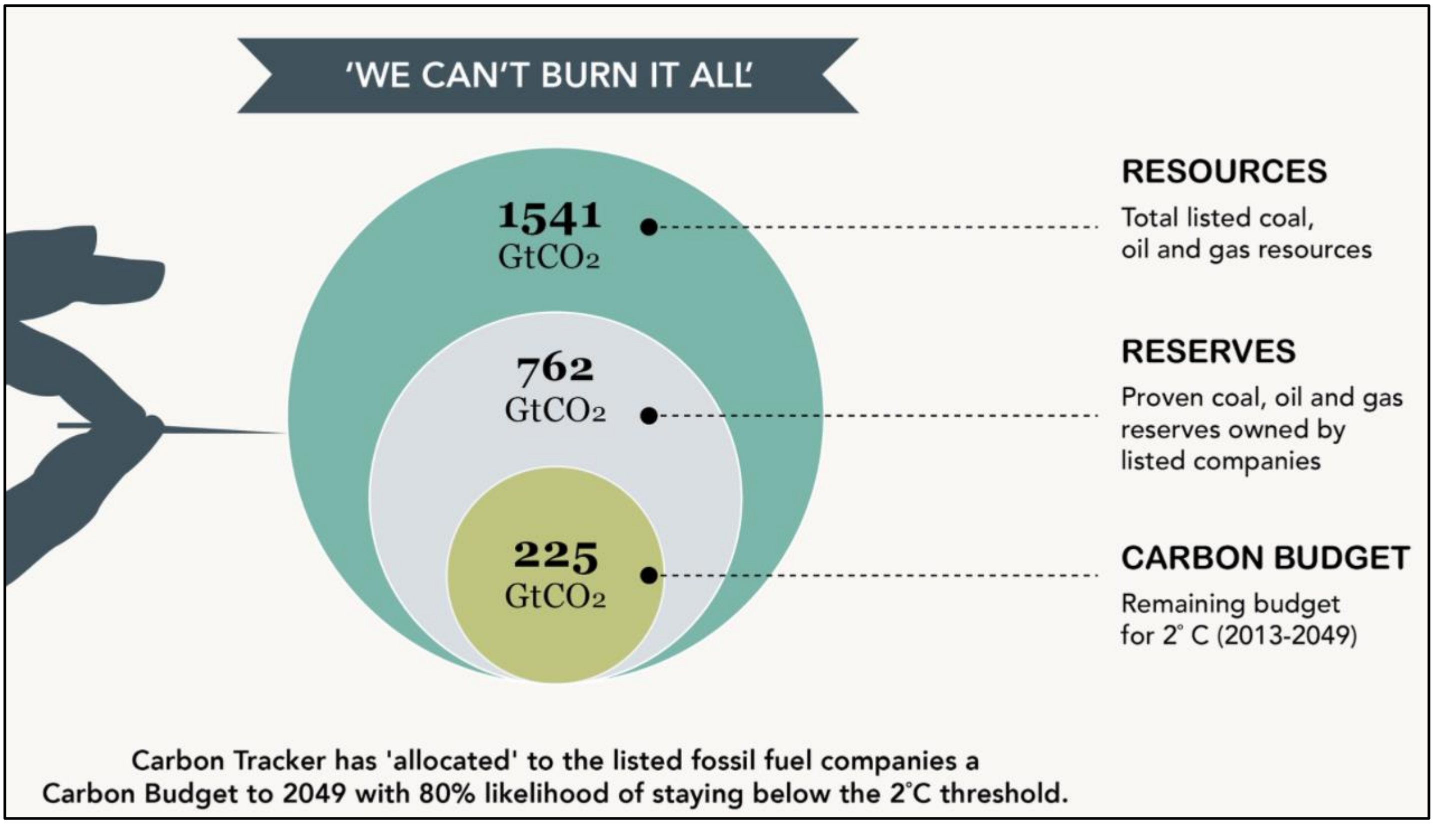
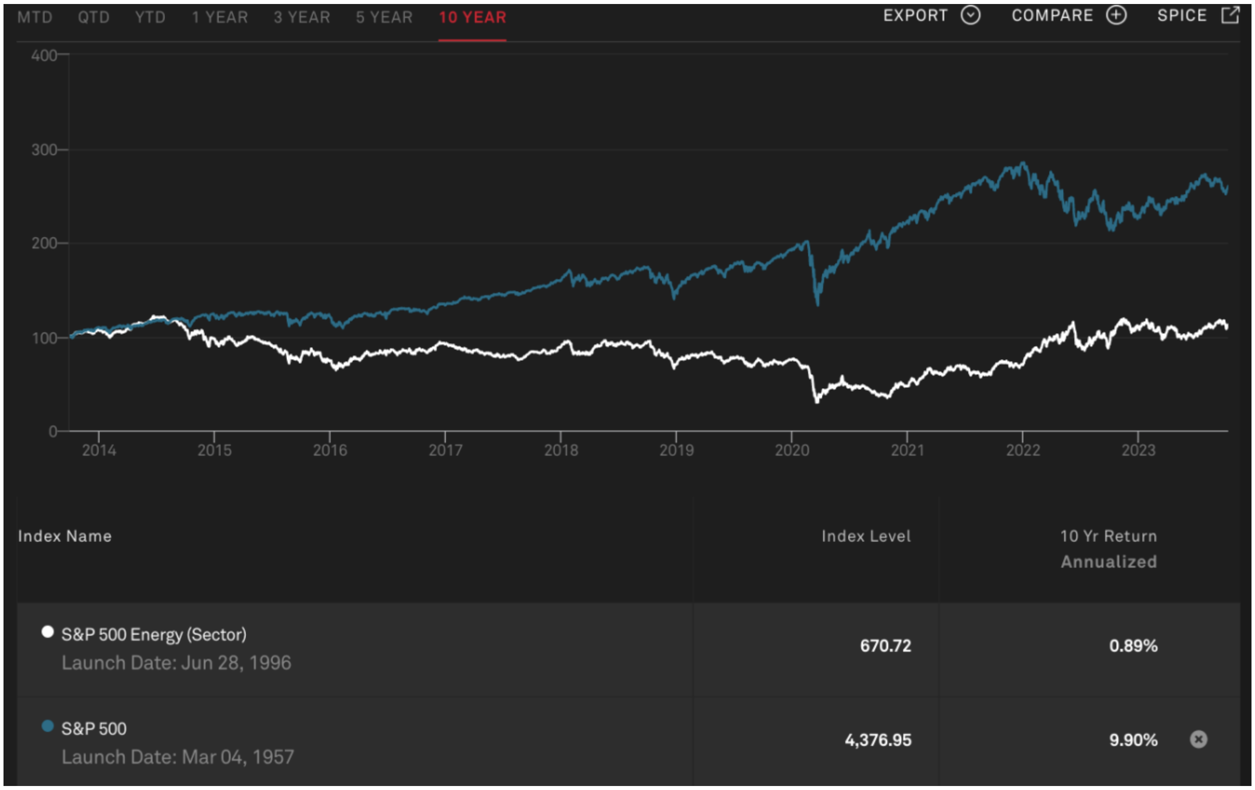


Illustration of carbon bubble, as reprinted in Katharine Earley, Carbon Tracker measures oil and coal risk for investors, The Guardian (Apr. 30, 2015). Source: Carbon Tracker Initiative.

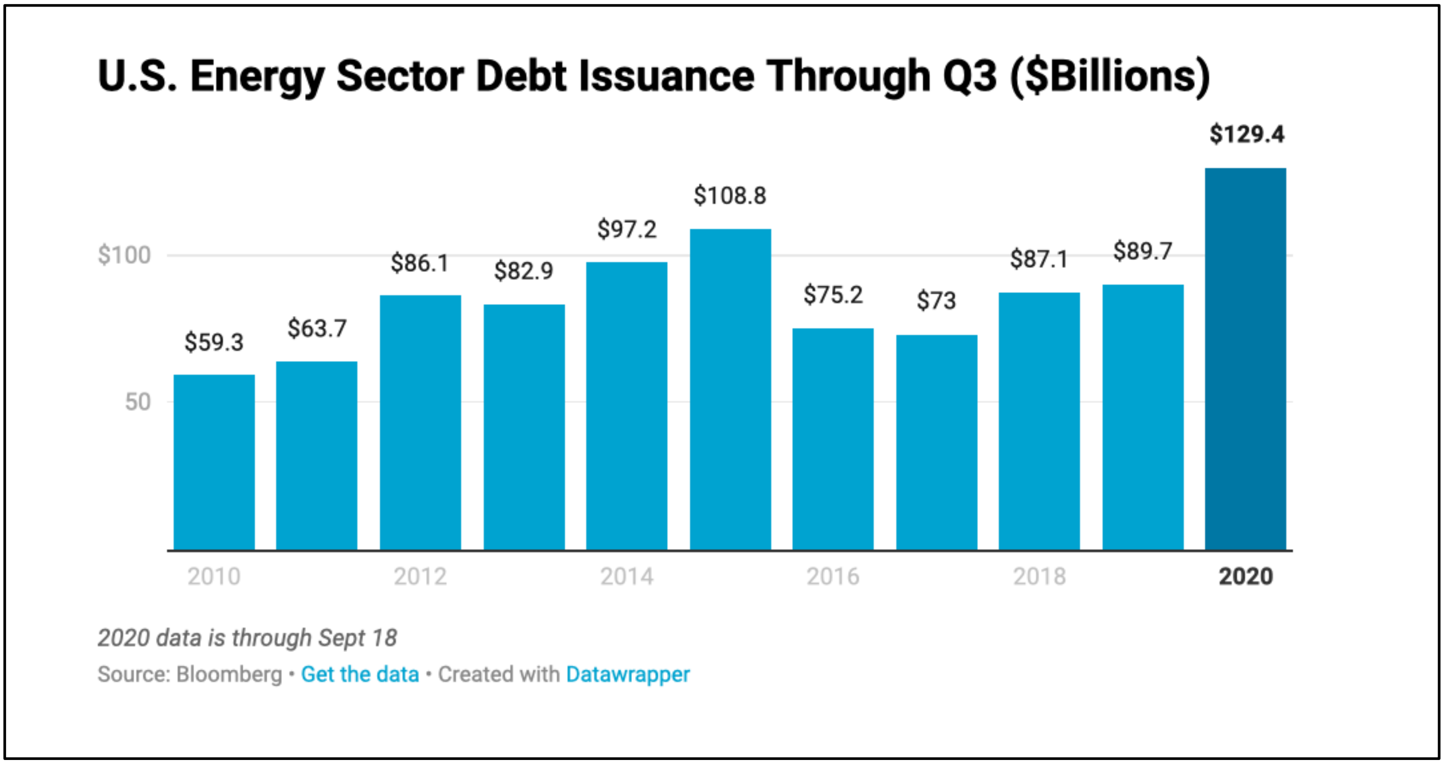
Appendix C



Comparison of ten-year performance of S&P 500 Energy Index[287] (white) with S&P 500 Index (blue).[288] Created using comparison tool at S&P 500 Dow Jones Indices (as of Oct. 12, 2023).

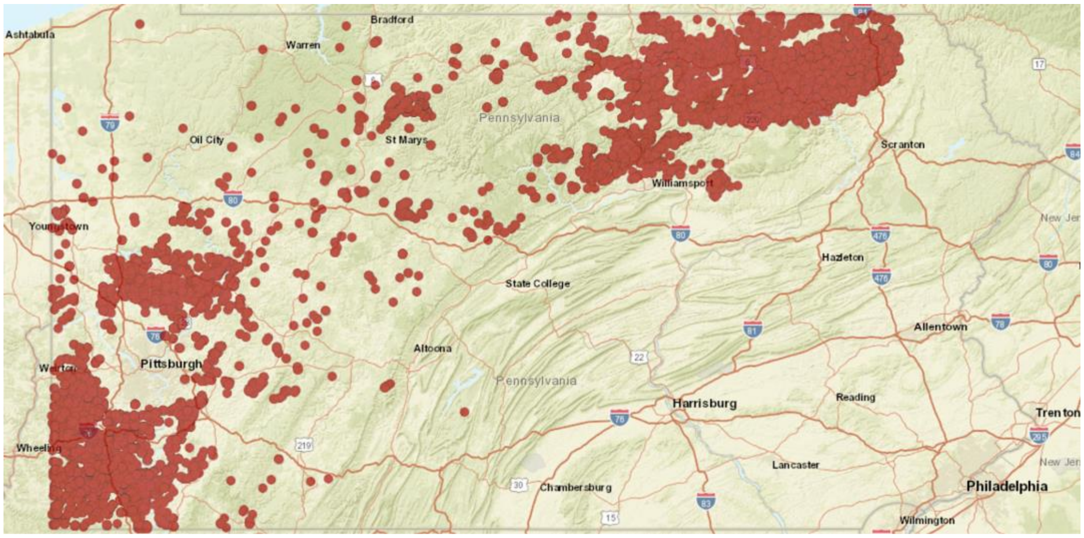
[287] The S&P 500 Energy Index includes only fossil fuel companies and does not encompass renewable energy.
[288] The energy sector's recovery in late 2020 came in part thanks to a large bailout of corporate debt markets by the federal government. *See* Lukas Ross, Alan Zibel, Dan Wagner & Chris Kuveke, Big Oil's $100 Billion Bender, Public Citizen (Sept. 30, 2020).

Appendix D



U.S. Energy Sector Debt Issuance Through Q3 ($Billions), as reprinted in Lukas Ross, Alan Zibel, Dan Wagner & Chris Kuveke, Big Oil's $100 Billion Bender, Public Citizen (Sept. 30, 2020). Source: Bloomberg.

Appendix E

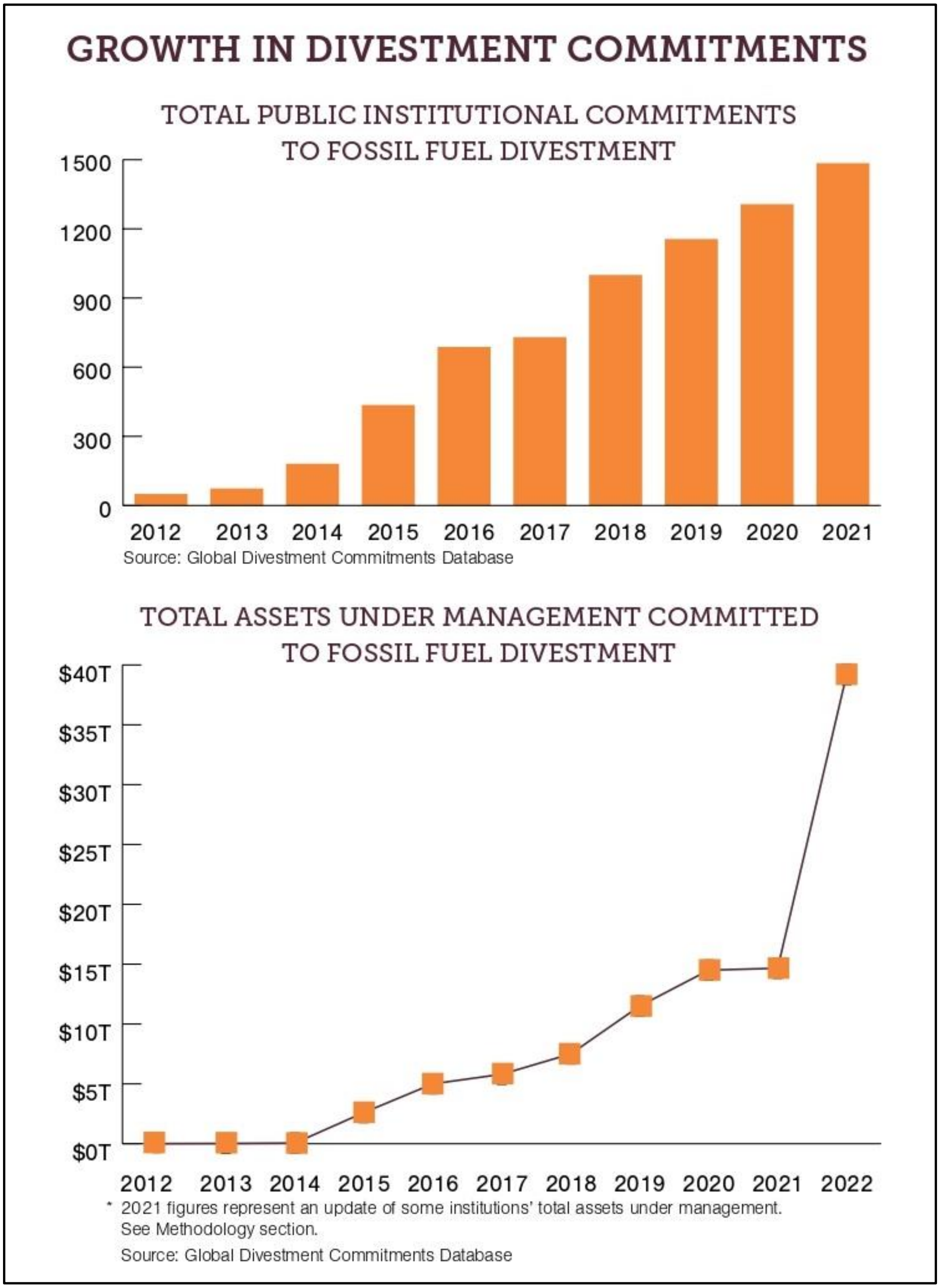


Active unconventional, or fracked, gas wells in Pennsylvania, as reprinted in Jon Hurdle, [As Evidence Mounts, New Concerns About Fracking and Health], Yale Environment 360 (Nov. 17, 2022). Source: Pennsylvania Department of Environmental Protection.

Appendix F

Penn State Campuses Map, as reprinted in Commonwealth Campuses, [World Campus deliver on promise of access, affordability](), Penn State News (July 17, 2015). Source: Penn State.

Appendix E



Growth in Divestment Commitments. Source: [A Decade of Progress Towards a Just Climate Future](), Institute for Energy Economics and Financial Analysis, Stand.earth, C40, & Wallace Global Fund (2021).