

Energy Re-Investment

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Despite worsening climate change threats, investment in energy—in the United States and globally—is dominated by fossil fuels. This Article provides a novel analysis of two pathways in corporate and securities law that together have the potential to shift patterns of energy investment.

The first pathway targets current investments and corporate decision-making. It includes efforts to influence investors to divest from owning shares in fossil fuel companies and to influence companies to address climate change risks in their internal decision-making processes. This pathway has received increasing attention, especially in light of the Paris Agreement and the Trump Administration’s decision to withdraw from it. But, alone, it will not be enough to foster transition to a cleaner mix of energy sources.

Key to achieving this goal of energy reinvestment is a second pathway focused on fostering investments in new companies innovating in clean energy. This pathway—which has received far less attention—uses emerging legal mechanisms to support greater investment in entrepreneurial clean energy ventures. The Article’s analysis of this pathway looks beyond the well-established ways in which subsidies support fossil fuels and renewable energy. It instead examines the significance for energy reinvestment of changes in U.S. securities regulation permitting greater crowdsourcing of investment and in state laws allowing for new types of corporations.

This Article is the first to examine how these two pathways can synergistically promote energy reinvestment. The first pathway moves money away from fossil fuels, while the second helps to spur needed reinvestment. The Article proposes strategies for deploying the tools in the two pathways together, taking into account the motivations and constraints of diverse investors and corporations.

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INTRODUCTION

In the lead up to and aftermath of President Trump’s June 1, 2017, withdrawal from the Paris Agreement, numerous business leaders—including of fossil fuel majors like Shell Oil—expressed their support for the agreement and dismay at his decision.¹ They not only sent letters to him but also took out collective advertisements in the *New York Post*, *New York Times*, and *Wall Street Journal*.² At the same time, in May 2017, 217 investors representing over \$15 trillion in assets sent a joint letter to the governments of the G7 and G20 urging their continued support for and implementation of the Paris Agreement.³ A 2018 report prepared by

1. Ben Popken, *Big Business Urges Trump To Stick with Paris Climate Accord*, NBC NEWS (May 31, 2017, 5:45 PM), <http://www.nbcnews.com/business/business-news/big-business-urges-trump-stick-paris-climate-accord-n766641> [https://perma.cc/QE33-PXPN]; Julia Horowitz & Jethro Mullen, *Top CEOs Tell the CEO President: You’re Wrong on Paris*, CNN MONEY (June 2, 2017, 12:43 PM), <http://money.cnn.com/2017/06/01/news/ceos-respond-trump-paris-agreement/index.html> [https://perma.cc/9UJP-47LG]; Abigail Abrams & Lucinda Chen, *‘Climate Change is Real’: Business Leaders React to President Trump’s Withdrawal from Paris Agreement*, FORTUNE (June 2, 2017, 8:54 AM), <http://fortune.com/2017/06/01/paris-climate-agreement-business-leaders-react/> [https://perma.cc/Z77S-UBLM].

2. *Business Support for the Paris Agreement*, CTR. FOR ENERGY & CLIMATE SOLS., <https://www.c2es.org/international/business-support-paris-agreement> [https://perma.cc/VG7C-6WH5].

3. ABP ET AL., LETTER FROM GLOBAL INVESTORS TO GOVERNMENTS OF THE G7 AND G20 NATIONS (May 8, 2017), <https://www.ceres.org/sites/default/files/Fact%20Sheets%20or%20misc%20files/Updated%20Global%20Investor%20Letter%20to%20G7%20%26%20G20>

the World Economic Forum reinforces the growing perception that climate change impacts are one of the most significant risks to global business.⁴

Despite strong public statements, however, the reality is that fossil fuels continue to dominate energy markets.⁵ For the past century, petroleum, coal, and natural gas have provided more than 80% of the energy consumed in the United States, and energy investments reflect that.⁶ The most fundamental market shift in recent years has been the evolution in which of these fossil fuels is dominant. The technological breakthrough of combining hydraulic fracturing with horizontal drilling allowed for large quantities of shale oil and gas to be extracted cheaply.⁷ This expansion of accessible natural gas and the resulting drop in its price, paired with regulatory and litigation efforts to shift the energy mix away from coal, has resulted in natural gas playing a greater role in U.S. and global electricity markets.⁸

Against this backdrop, this Article provides a novel analysis of two pathways in corporate and securities law that together have the potential to change patterns of energy investment. The first pathway targets current investments and corporate decision-making. It includes efforts to influence investors to divest from owning shares of such companies and to influence companies to address climate change risks in their internal decision-making processes. This pathway has received increasing

0%20Governments.pdf [https://perma.cc/UPR6-7CEB].

4. WORLD ECON. FORUM, THE GLOBAL RISKS OF 2018: 13TH EDITION (2018), http://www3.weforum.org/docs/WEF_GRR18_Report.pdf [https://perma.cc/9EVF-MU84].

5. Mariana Mazzucato & Gregor Semieniuk, *Financing Renewable Energy: Who Is Financing What and Why It Matters*, 127 TECH. FORECASTING & SOC. CHANGE 8, 8 (2018).

6. *Id.*; *Fossil Fuels Still Dominate U.S. Energy Consumption Despite Recent Market Share Decline*, U.S. ENERGY INFO. ADMIN. (July 1, 2016), <https://www.eia.gov/todayinenergy/detail.php?id=26912> [https://perma.cc/6MDB-B4KL]; *cf.* U.S. ENERGY INFO. ADMIN., ANNUAL ENERGY OUTLOOK 2018 (2018) (providing a detailed assessment of future trends in energy markets and reinforcing the key role of natural gas consumption), <https://www.eia.gov/outlooks/aeo/pdf/AEO2018.pdf> [https://perma.cc/3PG7-6FL6].

7. For a discussion of this expansion, see INT'L ENERGY AGENCY, GAS 2017: ANALYSIS AND FORECASTS TO 2022 EXECUTIVE SUMMARY 2–5 (2017); *cf.* ALAN J. KRUPNICK & ISABEL ECHARTE, ECONOMIC IMPACTS OF UNCONVENTIONAL OIL AND GAS DEVELOPMENT 14–24 (2017) (describing economic impact of shale gas on communities). The Department of Energy describes the process of horizontal drilling combined with hydraulic fracturing as follows:

The shallow section of shale wells are drilled vertically (much like a traditional conventional gas well). Just above the target depth—the place where the shale gas formation exists—the well deviates and becomes horizontal. At this location, horizontal wells can be oriented in a direction that maximizes the number of natural fractures intersected in the shale. These fractures can provide additional pathways for the gas that is locked away in the shale, once the hydraulic fracturing operation takes place.

U.S. DEP'T OF ENERGY, HOW IS SHALE GAS PRODUCED? (2013), https://www.energy.gov/sites/prod/files/2013/04/f0/how_is_shale_gas_produced.pdf [https://perma.cc/CCC3-AWRX].

8. *See* BP, BP STATISTICAL REVIEW OF WORLD ENERGY 1–7 (66th ed. 2017), https://www.bp.com/content/dam/bp-country/de_ch/PDF/bp-statistical-review-of-world-energy-2017-full-report.pdf [https://perma.cc/AB6G-NJHR]; Pilita Clark, *BP Highlights 'Decisive' Shift Away from Coal Power*, FIN. TIMES (June 13, 2017), <https://www.ft.com/content/da6a53da-5049-11e7-a1f2-db19572361bb>; *Moving Beyond Coal, by the Numbers*, SIERRA CLUB, <https://content.sierraclub.org/coal/victories> [https://perma.cc/8XGF-N253].

attention in the media and scholarly literature, especially in light of the Paris Agreement and the Trump Administration's decision to withdraw from it.⁹ Corporate risk disclosure, shareholder proposals, and fiduciary duties all create opportunities for risk internalization; at the same time, a number of major corporations and investors have supported the Paris Agreement or the broader energy divestment movement aimed at shifting investment out of fossil fuels.¹⁰

The second pathway focuses on fostering investments in new companies that are innovating in clean energy. It harnesses evolving corporate and securities laws that create new opportunities for entrepreneurial energy investment. This reinvestment pathway has received far less attention in this context.¹¹ But it is equally significant for our energy future. How we encourage new ideas to develop and get to market influences the pace at which, and sometimes whether, breakthroughs happen.¹² Beyond the well-established mechanisms of subsidies, which are crucial to the dominance of fossil fuels as well as to renewable energy development, the broadening of who can invest and the creation of new corporate forms provide opportunities for entrepreneurs to shift investment into newer start-ups focused on clean energy.¹³ Regulation promulgated pursuant to the JOBS Act allows for greater

9. For examples of some recent articles, see Eric J. Risley, Jr., *Sound and Fury, Signifying Nothing: Why Shareholder Suits Are Ineffective To Promote Corporate Response to Climate CHANGE*, 44 B.C. ENVTL. AFF. L. REV. 391 (2017); Carlton Tarpley, *How Shareholders Can Fill an Environmental Regulatory Void*, GEO. ENVTL. L. REV. (Jan. 29, 2017), <https://gelr.org/2017/01/29/how-shareholders-can-fill-an-environmental-regulatory-void/> [<https://perma.cc/YR76-V5LR>].

10. This pathway is explored in depth in Part II. Divestment refers to the withdrawal of investment (generally, selling an asset) in order to support social or political goals. It was a major strategy during the anti-apartheid movement, and current efforts around fossil fuels are often framed in reference to that movement and debates over its effectiveness. *See, e.g.*, William MacAskill, *Does Divestment Work?*, NEW YORKER (Oct. 20, 2015), <https://www.newyorker.com/business/currency/does-divestment-work> [<https://perma.cc/98ME-WD5F>] (arguing that divestment is ineffective in addressing share prices but can generate social stigma); Rebecca Leber, *Divestment Won't Hurt Big Oil and That's OK*, NEW REPUBLIC (May 20, 2015), <https://newrepublic.com/article/121848/does-divestment-work> (same) [<https://perma.cc/AV7A-PLNX>]. Current #BoycottNRA efforts in the aftermath of the Florida school shooting provide another example of divestment strategies. *See* Jacey Fortin, *A List of Companies Cutting Ties with the N.R.A.*, N.Y. TIMES (Feb. 24, 2018), <https://www.nytimes.com/2018/02/24/business/nra-companies-boycott.html> [<https://perma.cc/VS9R-3AC8>]; Julie Creswell & Tiffany Hsu, *Companies Cut Ties to the N.R.A., But Find There Is No Neutral Ground*, N.Y. TIMES (Feb. 23, 2018), <https://www.nytimes.com/2018/02/23/business/nra-boycott.html> [<https://perma.cc/MQV4-E62G>].

11. For an example of the focus on the first pathway in the public dialogue about climate change investments, see Christopher P. Skroupa, *Investing in the Age of Climate Change*, FORBES (Oct. 12, 2017, 4:04 PM), <https://www.forbes.com/sites/christopherskroupa/2017/10/12/investing-in-the-age-of-climate-change/#6934f1b71825> [<https://perma.cc/E8DJ-UFBM>].

12. For a discussion of how business innovation and policy interact, see Eric Biber, Sarah E. Light, J.B. Ruhl & James Salzman, *Regulating Business Innovation as Policy Disruption: From the Model T to Airbnb*, 70 VAND. L. REV. 1561, 1587–1603 (2017).

13. For an example analysis of crowdfunding of renewable energy projects, see Adrian Chiang, *How Entrepreneurs Can Crowdfund Renewable Energy Projects*, 8 J. BUS. ENTREPRENEURSHIP & L. 659, 680–83 (2015).

crowdsourcing of investment,¹⁴ and state law permitting public benefit corporations, which have dual goals of profit and helping society,¹⁵ provide interesting opportunities for energy innovation.¹⁶

This Article is the first to examine how these pathways can operate synergistically to shift energy investment and foster transition in the private sector to clean energy. The first pathway focuses on the risks associated with fossil fuels, but it does not always shift investment into clean energy technology. The second one is crucial for helping to spur not just divestment, but also reinvestment. The Article argues that what is needed is a holistic approach that amplifies the effects of efforts to shift investment out of fossil fuels by providing avenues for reinvestment in clean energy technology. Shifting investments away from fossil fuels will be far more effective if paired with efforts to encourage research into, and market expansion of, technologies that support a transition to a lower carbon economy.

The Article considers the role of these two pathways in both external investment and internal corporate decision-making. External investment (also referred to as capital investment) involves the investment of money or other resources into a business—through buying shares or extending credit—by external investors.¹⁷ Internal decision-making (also referred to as asset investment or asset allocation) involves choices by individual companies about how to deploy their financial and other resources and about what sort of product or service mix to produce.¹⁸

The following table depicts the ways in which the pathways focused on shifting existing investments and fostering new investments interact with internal and external choices, and the associated legal strategies discussed in this Article. The upper right cell of the table represents the second pathway's strategies aimed at fostering investment by outside investors in newer companies that are innovating in clean energy. The other three cells represent the strategies of the first pathway, which focus on both shifting external investment away from fossil fuels and shifting internal resource allocation. As the table illustrates, both external investment and internal decision-making play an important role in transitions in sources of energy, how efficiently energy is used, and what technologies are being considered.

14. Jumpstart Our Business Startups (JOBS) Act, Pub. L. No. 112-106, 126 Stat. 306 (2012) (codified as amended in scattered sections of 15 U.S.C.). As discussed in depth in Section III.A, the JOBS Act amends securities law in ways that provide additional opportunities for investment.

15. For a discussion of these emerging corporate forms, see Robert A. Katz & Antony Page, *The Role of Social Enterprise*, 35 VT. L. REV. 59, 86–93 (2010); Heerad Sabeti, *The For-Benefit Enterprise*, HARV. BUS. REV. (Nov. 2011), <https://hbr.org/2011/11/the-for-benefit-enterprise> [<https://perma.cc/825U-MBDX>]. Part III.B discusses their role in corporate reinvestment in depth.

16. This pathway is explored in depth in Part III.

17. See Kimberlee Leonard, *Examples of Capital Investment*, CHRON (Aug. 28, 2018), <http://smallbusiness.chron.com/examples-capital-investment-54295.html> [<https://perma.cc/H8KC-BKE4>].

18. Mitch Tuchman, *Investing Basics: What Is Asset Allocation?*, FORBES (Mar. 20, 2015, 9:45 AM), <https://www.forbes.com/sites/mitchelltuchman/2015/03/20/investing-basics-what-is-asset-allocation/#651671e70d17> [<https://perma.cc/YS4E-GUHF>].

Table: Divestment and Reinvestment Pathways¹⁹

	Divestment	Reinvestment
External	<p>Goal: Shifting existing investments.</p> <p>Action: External investors take money or other resources out of companies excessively exposed to climate change risk (e.g. University endowment divests from Exxon).</p> <p>Legal tools: Securities disclosure, which allows investors to determine risk exposure of potential divestment target companies. Interpretations of duties that enable consideration of climate change.</p>	<p>Goal: Fostering new investments.</p> <p>Action: External investors invest money or other resources in companies that are focused on renewable energy (e.g. Charitable foundation focused on sustainability makes low-interest loan to solar power company as part of PRI program).</p> <p>Legal tools: Benefit corporation statutes helping identify companies focused on public goals. JOBS Act encouraging crowdfunding.</p>
Internal	<p>Goal: Shifting existing investments.</p> <p>Action: Companies move internal resources away from fossil fuel investments (e.g. Utility decommissions coal plant before end of economic life).</p> <p>Legal tools: Shareholder proposal requesting utility to decommission coal plants. Shareholder fiduciary duty suit claiming company excessively exposed to climate change risk because too heavily invested in fossil fuels. Securities disclosure, focusing company attention on financial risks posed by energy transition.</p>	<p>Goal: Shifting existing investments.</p> <p>Action: Companies move internal resources into renewable energy investments (e.g. utility invests in solar power farm).</p> <p>Legal tools: Shareholder proposal requesting utility to invest in renewable energy resources. Securities disclosure, focusing company attention on financial opportunities associated with energy transition.</p>

This strategic pairing of the two pathways needs to be grounded in the complexity of the energy system transition. As Section I.C. explores in depth, fossil fuels vary

19. These pathways are explored in depth in Parts II and III.

in how much carbon dioxide their burning contributes to the atmosphere, and natural gas makes a significantly lower contribution than coal.²⁰ Low-carbon sources of energy bring other risks and externalities—for example, in the context of nuclear energy, accidents and difficulties of storing waste—that consumers and regulators may care about.²¹ Many crucial technologies for energy transition, such as energy storage, are still working towards being able to support large-scale markets.²² Reasonable people disagree on the best way forward, and options will evolve over time as technology, markets, and law develops.

This Article considers the possibilities and limitations in current developments focused on shifting existing energy investments away from fossil fuels and how these efforts can be leveraged to foster new clean energy investments. It also analyzes how different categories of companies and investors might take advantage of divestment and reinvestment strategies to foster more effective private sector energy transition.

Part I examines the complex context in which external investment and internal resource decisions take place. There are many types of energy markets and investors, which have different goals and constraints; they are also influenced by the physical characteristics of energy and many types of law relevant to energy. Investment decisions by private actors are only one part of how projects gain financial support; public finance also plays a huge role, as do laws that subsidize particular energy sectors. Corporate actors making internal energy choices vary widely, from ones whose business model is tied to particular sources of energy to those, like Target or Best Buy, that simply are significant users of energy. And people disagree on what “clean energy” is, how the energy system should transition, and what reinvestment would be most helpful in supporting that transition. This context helps to frame the possibilities and constraints for using corporate and securities law to spur reinvestment.

Part II focuses on the first pathway towards reinvestment that seeks to shift investment by both external investors and companies away from fossil fuels. It

20. U.S. Energy Info. Admin., *How Much Carbon Dioxide Is Produced When Different Fuels Are Burned?*, FREQUENTLY ASKED QUESTIONS (June 8, 2017), <https://www.eia.gov/tools/faqs/faq.php?id=73&t=11> [<https://perma.cc/CTZ6-QZU5>].

21. For analyses of safety, see CHARLES MILLER, AMY CUBBAGE, DANIEL DORMAN, JACK GROBE, GARY HOLAHAN & NATHAN SANFILIPPO, RECOMMENDATIONS FOR ENHANCING REACTOR SAFETY IN THE 21ST CENTURY: THE NEAR-TERM TASK FORCE REVIEW OF INSIGHTS FROM THE FUKUSHIMA DAI-ICHI ACCIDENT 25–50 (2011); WORLD HEALTH ORG., HEALTH RISK ASSESSMENT FROM THE NUCLEAR ACCIDENT AFTER THE 2011 GREAT EAST JAPAN EARTHQUAKE AND TSUNAMI BASED ON PRELIMINARY DOSE ESTIMATION 7–9 (2013); Emily Hammond, *Nuclear Power, Risk, and Retroactivity*, 48 VAND. J. TRANSNAT'L L. 1059, 1068–71 (2015); Amanda Leiter, *The Perils of a Half-Built Bridge: Risk Perception, Shifting Majorities, and the Nuclear Power Debate*, 35 ECOLOGY L.Q. 31, 58–64 (2008). For analyses of the waste issue, see WILLIAM M. ALLEY & ROSEMARIE ALLEY, TOO HOT TO TOUCH: THE PROBLEM OF HIGH-LEVEL NUCLEAR WASTE 3–169 (2013); MASS. INST. OF TECH., THE FUTURE OF NUCLEAR POWER: AN INTERDISCIPLINARY MIT STUDY 10 (2003); J. SAMUEL WALKER, THE ROAD TO YUCCA MOUNTAIN: THE DEVELOPMENT OF RADIOACTIVE WASTE POLICY IN THE UNITED STATES 76–94 (2009).

22. Ben Schiller, *Large-Energy Storage Is the (Virtual) Power Plant of the Future*, FAST CO. (Mar. 28, 2017), <https://www.fastcompany.com/3069217/large-scale-energy-storage-is-the-virtual-power-plant-of-the-future> [<https://perma.cc/7VVC-UZ8V>].

discusses the evolving legal tools, and their constraints, for enhancing internal reallocation of assets by private sector entities (asset reinvestment) and shifting capital away from fossil fuels by external investors (capital reinvestment). Some tools, such as shareholder proposals and corporate disclosure requirements, aim at creating more transparency around companies' decisions on how they manage climate risk and their energy-related asset portfolios. These tools have achieved some modest success to date in improving corporate disclosure of climate risk. But their capacity to generate the kind of deeper cultural change in businesses that might motivate strong climate action is uncertain, at least so long as corporate law rules continue to place primacy on shareholder wealth maximization over long-term risk management. For its part, the divestment movement has primarily relied on nonlegal tools such as public media campaigns and advocacy to advance its objectives. However, over the longer term, its success in encouraging investors to divest from fossil fuels is intimately linked to the scope of the legal fiduciary duties owed by investment fund managers (like pension trustees) and directors of companies to their respective members and shareholders (duties which may promote socially responsible clean energy investment in some cases but retard it in others).

Part III turns to consider the clean energy reinvestment side of the equation, which has received far less attention from climate advocates and legal scholars. Much of the literature in this field has focused on targeted tools like government subsidies and tax breaks for renewable energy projects. However, broader developments in corporate and securities law, linked to ideas of social entrepreneurship, may also be important drivers of clean energy investment, although their application in this area remains largely untested. Examples include securities law reforms that may broaden crowdfunding opportunities for clean technology and vehicles for social enterprise such as public benefit corporations. This Part argues that these tools could work together with longstanding efforts to encourage socially responsible investment, as well as the corporate and securities law mechanisms discussed in Part II, and serve as important pieces of supporting a shift towards clean energy investment.

The Article concludes with an examination of options for bringing efforts to move investment away from fossil fuels into closer alignment with those that would support reinvestment in clean energy. It maps how the different pathways to energy divestment and reinvestment interact. It then considers how the varying constraints and interests of external investors and companies will likely shape their receptiveness to efforts along each of the two pathways described in the Article. In so doing, it identifies four potential categories of investors and companies: Responsive, Receptive, Reluctant and Recalcitrant. This matrix provides a basis for better targeting of strategies for energy reinvestment, which will be essential in fostering effective energy transition in the private sector.

I. THE ROLE OF INVESTMENT AND CORPORATE DECISION-MAKING IN ENERGY TRANSITION

This Article focuses on the current and potential role of corporate and securities law in spurring internal and external energy reinvestment choices. However, the pathways outlined in Parts II and III occur against a complex backdrop. There are markets and investments in each source of energy, the secondary systems that use them (such as electricity and transportation), and in predictions of energy prices in

the future.²³ These markets take place against a backdrop of governmental decisions that help to financially support or undermine sectors of the energy industry.²⁴ A wide range of investors with different rules and drivers participate in those markets.²⁵ Moreover, every company uses energy in some way, and so even companies that do not have energy as a core business focus make decisions that impact how much and what types of energy are needed.²⁶ Finally, disagreement exists over which sources of energy are “clean” and what type of reinvestment is needed.²⁷

This backdrop structures the constructive role that corporate and securities law can play in energy reinvestment. For pathways encouraging both divestment and reinvestment to be effective, they must have clarity about what the intervention into this complex system is trying to accomplish. As Parts II and III explore in depth, actions that gain a lot of public attention, like divestment by major institutional investors, may have limited impact on the overall flow of energy investment if not paired strategically with other mechanisms.

A. Complexity of Energy Markets

The energy system involves a complex interaction of physical, market, and regulatory elements. Sources of energy—coal, natural, gas, oil, nuclear, and renewables—have varying (1) physical characteristics, (2) markets that trade in them, and (3) statutes and regulations at multiple levels of government that apply to them.²⁸ The secondary systems that use these sources of energy—electricity and transportation dominate—similarly involve different physical challenges, markets, and legal regimes.²⁹ For example, U.S. electricity markets are structured through varying regional transmission organizations and entities at the multi-state wholesale level and state law at a more local level.³⁰ Markets relevant to transportation vary significantly from electricity ones and include fuels, vehicles, and underlying infrastructure.³¹

Focusing primarily on the market aspect of the energy system does not eliminate this complexity because the markets themselves reflect this diversity. As the Federal Energy Regulatory Commission explains:

Energy markets involve both physical and financial elements. The physical markets contain the natural resources, infrastructure, institutions and market participants involved in producing energy and delivering it to consumers. They also include the trading of and payment for the physical commodity - e.g., natural gas. The financial markets include the buying and selling of financial products derived from the

23. *See infra* Section I.A.

24. *See infra* Section I.A.

25. *See infra* Section I.B.

26. *See infra* Section I.B.

27. *See infra* Section I.C.

28. *See* LINCOLN L. DAVIES, ALEXANDRA B. KLASS, HARI M. OSOFSKY, JOSEPH P. TOMAIN & ELIZABETH J. WILSON, ENERGY LAW AND POLICY 19–91 (2014).

29. *Id.* at 283–84.

30. *Id.* at 306–08.

31. *Id.* at 509–15.

physical energy. These financial markets also include market structures and institutions, market participants, products and trading, and have their own drivers of supply and demand. In general, physical and financial markets can be distinguished by the products and by the intentions of the market participants involved. Physical products are those whose contracts involve the physical delivery of the energy. Physical market participants are those who are in the market to make or take delivery of the commodity. Financial products usually do not involve the delivery of natural gas, electricity, or oil; instead, they involve the exchange of money.³²

Energy reinvestment involves both physical and financial markets, as they together affect how different sectors are supported and incentivized.

Moreover, these markets operate in a context in which governmental regulatory decisions are influencing supply, demand, and prices. For example, the U.S. government subsidizes both fossil fuels and renewable energy through tax incentives.³³ The process of tax reform in 2017 suggests that both kinds of subsidies are likely to continue.³⁴ The first version of the tax bill would have significantly cut back renewable energy subsidies.³⁵ This would have been devastating to those industries—tax-equity financing supports approximately two-thirds of wind and three-quarters of solar projects.³⁶ However, both tax-equity investors and renewable energy companies expressed their concerns, and significant wind industry in key states with Republican legislators helped to largely eliminate those rollbacks in the final bill.³⁷ These interactions mirror others highlighted by Hari Osofsky and Jacqueline Peel in their work on energy partisanship, which indicates that real economic alignment and corporate decision-making can play key roles in overcoming partisan divides.³⁸

The pathways to divestment from carbon-intensive sources and reinvestment in “cleaner” sources thus should involve shifts in multiple kinds of markets. Strategies to motivate those shifts under corporate and securities law need to take into account the complex interplay of physical constraints, markets, and regulation.

B. Types of Energy Investors and Companies

Corporations, other than emerging new forms described in Section III.B, are largely driven by profit motives in every sector of the energy industry, from

32. FED. ENERGY REGULATORY COMM’N, ENERGY PRIMER: A HANDBOOK OF ENERGY MARKET BASICS 1 (2015).

33. See David M. Schizer, *Energy Subsidies: Worthy Goals, Competing Priorities and Flawed Institutional Design*, 70 TAX L. REV. 243, 273–76 (2017).

34. Brad Plumer, *Tax Bill Largely Preserves Incentives for Wind and Solar Power*, N.Y. TIMES (Dec. 16, 2017), <https://www.nytimes.com/2017/12/16/climate/tax-bill-wind-solar.html> [<https://perma.cc/X6FZ-Q3MW>].

35. *Id.*

36. *Id.*

37. *Id.*

38. Hari M. Osofsky & Jacqueline Peel, *Energy Partisanship*, 65 EMORY L.J. 695 (2016).

extraction to electricity generation and transportation.³⁹ Investment is crucial to corporations having the capital to operate and develop new projects. The availability of investment funds helps structure which industries thrive or fail and how the energy sector transitions over time.⁴⁰

A mixed picture emerges from the latest research on investment trends and their implications for energy transition. On the one hand, fossil fuel investments are far more extensive than renewable energy ones. In 2013, renewable energy investments represented only 16% of the \$1.6 trillion total energy sector investments globally, and investment in power sector fossil fuels rose 7% from 2013 to 2014.⁴¹ On the other hand, renewable energy finance has grown substantially, from \$45 billion in 2004 to \$270 billion in 2014, across the various stages of the innovation chain, from research and development (R&D) to full-scale market deployment.⁴² Although the percentages of renewable energy investment remain low compared to fossil fuels, the 2014 net investment into new renewable energy capacity was twice as large as for fossil fuels.⁴³ More recent data suggests similarly complex trends:

Investment in renewables excluding large hydro fell by 23% to \$241.6 billion, but the amount of new capacity installed increased from 127.5GW in 2015 to a record 138.5GW in 2016. Together, the new renewable sources of wind, solar, biomass and waste, geothermal, small hydro and marine accounted for 55.3% of all the gigawatts of new power generation added worldwide last year.⁴⁴

And as renewable energy investment has grown, deployment has as well.⁴⁵

A wide range of investors participate in energy markets. Public finance plays an important role globally in supporting energy projects and determining patterns of energy development; according to a new report by environmental non-governmental organizations (NGOs), G20 countries are providing four times as much fossil fuel funding as renewable energy funding.⁴⁶ In the private finance context that is the focus of this Article, a 2013 Climate Policy Initiative report indicates that “[t]he big prize is institutional investors – pension funds, insurance companies, and other long-term investors – whose \$71 trillion in assets form one of the largest pools of private capital in the world, leading policy makers to ask whether institutional investors could help

39. Brett McDonnell, *Benefit Corporations and Strategic Action Fields or (The Existential Failing of Delaware)*, 39 SEATTLE U. L. REV. 263, 270–73 (2016).

40. Mazzucato & Semieniuk, *supra* note 5, at 11–12.

41. *Id.* at 8.

42. *Id.*

43. *Id.*

44. FRANKFURT SCHOOL, GLOBAL TRENDS IN RENEWABLE ENERGY INVESTMENT 2017, at 12 (2017), <https://europa.eu/capacity4dev/unep/documents/global-trends-renewable-energy-investment-2017> [<https://perma.cc/YW5W-YZT6>].

45. *Renewable Energy Continuing to Increase Market Share*, INT’L ENERGY AGENCY (July 28, 2016), <https://www.iea.org/newsroom/news/2016/july/renewable-energy-continuing-to-increase-market-share.html> [<https://perma.cc/7GXN-BN64>].

46. ALEX DOUKAS, KATE DEANGELIS & NICOLE GHIO, TALK IS CHEAP: HOW G20 GOVERNMENTS ARE FINANCING CLIMATE DISASTER 3 (2017), http://priceofoil.org/content/uploads/2017/07/talk_is_cheap_G20_report_July2017.pdf [<https://perma.cc/5GEN-9BY7>].

meet the climate change funding challenge.⁴⁷ Another major type of institutional investor in those markets is mutual funds.⁴⁸ These institutional investors are particularly crucial in public markets, like the New York Stock Exchange or Nasdaq.⁴⁹

Other types of private investors also play a key role in the direction of energy investment, particularly angel investors and venture capital funds.⁵⁰ These are particularly important for investments in closely held businesses whose stock is not traded on public markets.⁵¹ They are thus crucial for the types of investments and companies we discuss in Part III. Another significant category of institutional investors, hedge funds, covers a range of investment funds that follow quite varied strategies and have an important presence in both public and private markets.⁵²

Corporations vary in how crucial carbon intensive energy sources are to their business models. In the energy sector, even within fossil fuel companies, there is great variation, for example, between coal versus oil and natural gas companies versus renewable energy companies.⁵³ Car companies tend to be relatively neutral about what kind of cars they make, and equally, utilities are often relatively neutral

47. DAVID NELSON & BRANDON PIERPOINT, CLIMATE POLICY INITIATIVE, THE CHALLENGE OF INSTITUTIONAL INVESTMENT IN RENEWABLE ENERGY, at i (2013), <http://climatepolicyinitiative.org/wp-content/uploads/2013/03/The-Challenge-of-Institutional-Investment-in-Renewable-Energy.pdf> [<https://perma.cc/GT4K-56L8>].

48. Mutual funds are “investment companies” under federal securities law. According to the Securities and Exchange Commission (SEC), “an ‘investment company’ is a company (corporation, business trust, partnership, or limited liability company) that issues securities and is primarily engaged in the business of investing in securities.” *Fast Answers, Investment Companies*, U.S. SEC. & EXCH. COMM’N, <https://www.sec.gov/fast-answers/answersmfinvcohtm.html> [<https://perma.cc/2TEN-QP2Y>].

49. See Jayne W. Barnard, *Institutional Investors and the New Corporate Governance*, 69 N.C. L. REV. 1135 (1991); K.J. Martijn Cremers & Simone M. Sepe, *Institutional Investors, Corporate Governance, and Firm Value*, 41 SEATTLE U. L. REV. 387 (2018).

50. Venture capital, private equity, and hedge funds are types of funds that would, like mutual funds, qualify as investment companies, subject to the extensive regulation of the Investment Company Act of 1940, except that they have availed themselves of exemptions from that Act. See generally Darian M. Ibrahim, *The (Not So) Puzzling Behavior of Angel Investors*, 61 VAND. L. REV. 1405 (2008); Manuel A. Utset, *Reciprocal Fairness, Strategic Behavior, and Venture Survival: A Theory of Venture Capital-Financed Firms*, 2002 WIS. L. REV. 45.

51. See Ibrahim, *supra* note 50, at 1406.

52. See *id.* Robert C. Illig, *What Hedge Funds Can Teach Corporate America: A Roadmap for Achieving Institutional Investor Oversight*, 57 AM. U. L. REV. 225 (2007). Most significantly, some hedge funds engage in shareholder activism, targeting the management of public companies which the funds believe are under-performing in share value. Such hedge fund activism is controversial, with defenders and critics. Compare Lucian A. Bebchuk, *The Myth That Insulating Boards Serves Long-Term Value*, 113 COLUM. L. REV. 1637 (2013) (defending), with John C. Coffee, Jr. & Darius Palia, *The Wolf at the Door: The Impact of Hedge Fund Activism on Corporate Governance*, 41 J. CORP. L. 545, 581–603 (2016) (criticizing). For those who take a critical view, such activist funds are a key villain in creating pressure for a short-term profit maximization approach to managing public companies.

53. Osofsky & Peel, *Energy Partisanship*, *supra* note 38.

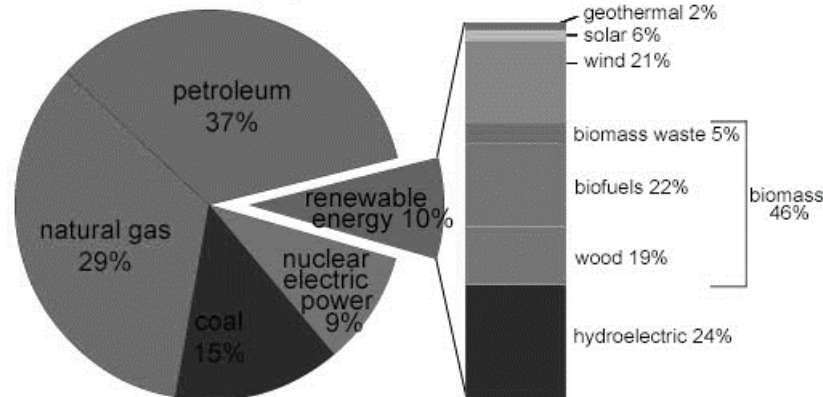
about energy sources other than needing to recoup infrastructure investments.⁵⁴ In other sectors, there is also significant variation, but generally, companies are able to make shifts in sourcing of energy and deploy energy efficiency measures.⁵⁵

C. Disagreements over the Definition of “Clean” Energy and Needed Transition

In the U.S. context, which is the legal focus of this Article, energy consumption continues to be dominated by fossil fuels—80% in 2017, as depicted in the following chart from the U.S. Energy Information Administration.⁵⁶

U.S. energy consumption by energy source, 2016

Total = 97.4 quadrillion
British thermal units (Btu)



Note: Sum of components may not equal 100% because of independent rounding.

Source: U.S. Energy Information Administration, *Monthly Energy Review*, Table 1.3 and 10.1, April 2017, preliminary data



However, the shift in which fossil fuels are being used—paired with energy efficiency, renewables growth, and a recession—caused a decline in greenhouse gas emissions.⁵⁷ The primary greenhouse gas being reduced through fossil fuel shifting is carbon dioxide, which, though not the most potent greenhouse gas, represented

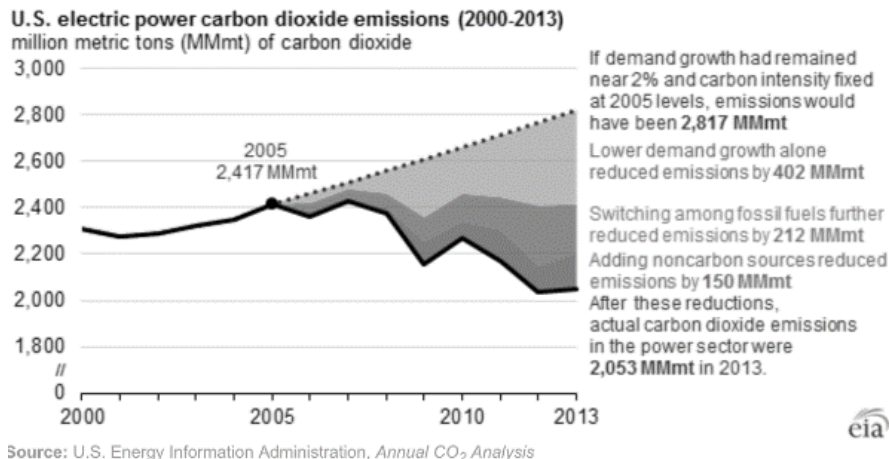
54. *Id.*

55. *Id.*

56. *U.S. Energy Facts Explained: Consumption & Production*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/energyexplained/?page=us_energy_home [<https://perma.cc/7NV3-VTLK>].

57. Perry Lindstrom, *Lower Electricity-Related CO₂ Emissions Reflect Lower Carbon Intensity and Energy Use*, U.S. ENERGY INFO. ADMIN. (Oct. 23, 2014), <https://www.eia.gov/todayinenergy/detail.php?id=18511> [<https://perma.cc/7T3Q-VLZS>].

81% of U.S. greenhouse gas emissions in 2015.⁵⁸ The following chart, also from the U.S. Energy Information Administration, depicts that decline.⁵⁹



This shift, due to switching among fossil fuels, is at the core of the debate over what constitutes clean energy. Coal burned for fuel produces almost twice the carbon dioxide emissions of natural gas, and so the shift to a greater share of natural gas in energy production has significantly decreased emissions.⁶⁰ However, natural gas is still a fossil fuel, with a larger carbon footprint than either nuclear or renewable energy sources.⁶¹ Moreover, if leakage of methane, a potent greenhouse gas, is not controlled, the climate change impact of a transition to natural gas is less positive.⁶² Debates also occur over whether nuclear energy, despite its low-carbon footprint, should be considered clean due to the risks associated with it and issues around storing the waste produced by it.⁶³

These issues become even more complex in the context of trying to raise the percentage of renewables in energy markets because of intermittency—the wind does

58. For a description of the major greenhouse gases, see *Overview of Greenhouse Gases, Greenhouse Gas Emissions*, U.S. ENVTL. PROTECTION AGENCY, <https://www.epa.gov/ghgemissions/overview-greenhouse-gases> [<https://perma.cc/6JZN-KAG5>].

59. Lindstrom, *supra* note 57.

60. *How Much Carbon Dioxide Is Produced When Different Fuels Are Burned?, Frequently Asked Questions*, U.S. ENERGY INFO. ADMIN., <https://www.eia.gov/tools/faqs/faq.php?id=73&t=11> [<https://perma.cc/G688-UVF4>] (last updated June 8, 2018).

61. Lindstrom, *supra* note 57.

62. Federal methane emissions regulation is currently in flux, and states vary in how they regulate methane emissions. Waste Prevention, Production Subject to Royalties, and Resource Conservation, 82 Fed. Reg. 58050, 58062 (Dec. 8, 2017) (codified at 43 C.F.R. pts. 3160 & 3170); PENN STATE CENTER FOR ENERGY LAW AND POLICY, WHITE PAPER, REGULATION OF METHANE EMISSIONS FROM UNCONVENTIONAL OIL AND GAS: CURRENT APPROACHES AND POSSIBILITIES FOR INNOVATION BASED ON EMERGING SCIENCE (Sep. 2018) <https://sites.psu.edu/celp/files/2018/09/PSUCELP-Methane-Emissions-Regulation-White-Paper-164277w.pdf>.

63. For analyses of both of these issues, see *supra* note 21 and accompanying text.

not always blow and the sun does not always shine.⁶⁴ While this issue could potentially be addressed fully through energy storage, that technology is not yet there.⁶⁵ Many have argued for the pairing of renewables and natural gas in electricity production, with natural gas replacing the baseload function of coal (though some argue only on a transitional basis until energy storage can serve in that role).⁶⁶ At the same time, numerous environmental advocates object to the characterization of natural gas as “clean” because it is a fossil fuel.⁶⁷

Although these disputes frame the context for this Article’s energy reinvestment analysis, the Article’s approach does not rely on a particular interpretation of “clean” energy to be effective. Its focus is on the corporate and financial legal mechanisms that exist to spur transition, with an underlying assumption that reducing greenhouse gas emissions and other environmental externalities should be the goal of reinvestment.

II. EFFORTS TO SPUR ENERGY TRANSITION THROUGH INVESTOR AND CORPORATE LEGAL OBLIGATIONS

This Part explores the potential, and limitations, of an evolving set of legal tools under corporate and securities law to drive energy reinvestment by companies and large-scale investors. “Energy reinvestment” in this sense includes both efforts to enhance internal reallocation of assets by private sector entities (asset reinvestment) and shifting capital away from fossil fuels by external investors (capital reinvestment). The latter has been the focus of the energy divestment movement, which has sought to create public pressure on businesses to shift investments and assets out of fossil fuels.

The evolution of this movement has been paralleled by an increasing focus on the possibilities for using established corporate and securities law mechanisms to encourage both internal and external divestment and reinvestment. Tools in this category include business risk disclosure requirements, shareholder proposals, and

64. Michael B. Gerrard, *Legal Pathways for a Massive Increase in Utility-Scale Renewable Generation Capacity*, 47 ENVTL. L. REP. 10591, 10613 (2017); Earl J. Ritchie, *Managing Wind and Solar Intermittency in Current and Future Systems*, FORBES (Feb. 27, 2017, 5:14 PM), <https://www.forbes.com/sites/uenergy/2017/02/27/managing-wind-and-solar-intermittency-in-current-and-future-systems/#497ed7223c5d> [<https://perma.cc/8WNB-WKYF>].

65. For an analysis of the role of energy storage and the law relevant to it, see Amy L. Stein, *Reconsidering Regulatory Uncertainty: Making a Case for Energy Storage*, 41 FLA. ST. U. L. REV. 697 (2014). FERC’s decision to integrate energy storage more fully into energy markets is an important step. Ethan Howland & Jeremy Dillon, *FERC Opens Path for Energy Storage Market Participation*, CQ ROLL CALL, Feb. 15, 2018, 2018 WL 896722.

66. APRIL LEE, OWEN ZINAMAN & JEFFREY LOGAN, NAT’L RENEWABLE ENERGY LAB., OPPORTUNITIES FOR SYNERGY BETWEEN NATURAL GAS AND RENEWABLE ENERGY IN THE ELECTRIC POWER AND TRANSPORTATION SECTORS (2012), <https://www.nrel.gov/docs/fy13osti/56324.pdf> [<https://perma.cc/F5C3-XDLR>].

67. For an example of this position, see Abigail Dillen, *Here’s the Dirt That the Industry Won’t Tell You About “Clean” Natural Gas*, EARTHJUSTICE (Oct. 30, 2017), <https://earthjustice.org/blog/2017-october/here-s-the-dirt-that-industry-won-t-tell-you-about-clean-natural-gas> [<https://perma.cc/8K9X-DFHX>].

actions to enforce the fiduciary duties of company directors. These tools are currently being tested and deployed by a range of public and private actors in the United States and also in comparable common law jurisdictions such as Australia and the United Kingdom.⁶⁸ Analysis of early experience using these tools illustrates that they have limited, though varied, potential individually to influence business and investment decision-making. Generally, they are constrained by the prevailing emphasis on short-term profit maximization, rather than long-term risk management, within commercial practice.

A. Divestment Movement

In September 2014, as world leaders gathered in New York for the United Nations Climate Summit, the heirs to the fabled Rockefeller oil fortune announced that the Rockefeller Foundation would be withdrawing its funds from fossil fuel investments due to climate change concerns.⁶⁹ The Rockefeller Brothers Fund controls around \$860 million in assets, with seven percent invested, at the time, in fossil fuels.⁷⁰ It justified this action to divest from fossil fuel assets as both a “moral imperative to preserve a healthy planet”⁷¹ and an economically sound investment strategy at a time of growing uncertainty about the future of fossil fuels such as coal. As Fund President, Stephen Heintz, described it: “The action we’re taking is symbolism, but it is important symbolism. We’re making a moral case, but also, increasingly, an economic case.”⁷²

The Rockefellers’ action is part of a wider global movement that has taken shape in recent years calling on major investors to withdraw their funds from fossil fuel

68. Corporate and securities law tools across Anglo-American common law jurisdictions are broadly similar, however, the different legal contexts may offer greater or lesser scope for deployment. For an analysis of corporate climate risk disclosure in Australia drawing comparisons with the United States and United Kingdom, see Anita Foerster, Jacqueline Peel, Hari Osofsky & Brett McDonnell, *Keeping Good Company in the Transition to a Low Carbon Economy? An Evaluation of Climate Risk Disclosure Practices in Australia*, 35 *COMPANY & SEC. L. J.* 154 (2017), and Anita Foerster & Jacqueline Peel, *US Fossil Fuel Companies Facing Legal Action for Misleading Disclosure of Climate Risks: Could It Happen in Australia?*, *AUSTRALIAN ENV’T REV.*, June 2017, at 56. For a similar comparison across jurisdictions of shareholder rights to put a resolution to the general meeting, see KYM SHEEHAN, *SHAREHOLDER RESOLUTIONS IN AUSTRALIA: IS THERE A BETTER WAY?* (2017).

69. Suzanne Goldenberg, *Heirs to Rockefeller Oil Fortune Divest from Fossil Fuels over Climate Change*, *THE GUARDIAN* (Sept. 22, 2014, 12:19), <http://www.theguardian.com/environment/2014/sep/22/rockefeller-heirs-divest-fossil-fuels-climate-change> [<https://perma.cc/D5WG-G77Q>].

70. *Id.*

71. Joby Warrick & Steven Mufson, *Big Oil’s Heirs Join Call for Action as Climate Summit Opens*, *WASH. POST: HEALTH & SCI.* (Sept. 21, 2014) (quoting Valerie Rockefeller Wayne, a great-great-granddaughter of oil magnate John D. Rockefeller Sr. and a trustee of the largest charitable foundation in which the family still plays the leading role), http://www.washingtonpost.com/national/health-science/big-oils-heirs-join-call-for-action-as-climate-summit-opens/2014/09/21/ab27b1ce-40ea-11e4-b0ea-8141703bbf6f_story.html [<https://perma.cc/SD4J-RPU3>].

72. *Id.*

investments, particularly coal.⁷³ The divestment movement consists of a loose coalition of nongovernmental organizations, religious groups, local governments, student organizations, institutional investors, and investor groups who stress the ethical, environmental, and financial risks associated with fossil fuel investments in an increasingly carbon-constrained world.⁷⁴ This movement has been fostered by growing attention to and interest in the role that large investors and asset owners might play in influencing corporate behavior and regulation to better address climate change.⁷⁵

The movement's advocacy and legal strategies represent a significant departure from traditional environmental campaigning on climate change, which has generally sought to force regulatory action by governments.⁷⁶ The divestment movement focuses on generating public pressure for investors to divest from fossil fuels, but it also often works in tandem with broader corporate law efforts to shift the behavior of the corporate and financial sector on climate change. These efforts, discussed further below, include improving companies' disclosure of their climate risk management processes, encouraging greater transparency by companies and investors about the extent of their fossil fuel holdings, and (potentially) taking action to enforce legal duties of directors or pension fund trustees to require them to take

73. Neil Gunningham, *Review Essay: Divestment, Non-state Governance and Climate Change*, 39 *LAW & POL'Y* 309, 318 (2017); ATIF ANSAR, BEN CALDECOTT & JAMES TILBURY, STRANDED ASSETS AND THE FOSSIL FUEL DIVESTMENT CAMPAIGN: WHAT DOES DIVESTMENT MEAN FOR THE VALUATION OF FOSSIL FUEL ASSETS? 18 (2013), <http://www.smithschool.ox.ac.uk/publications/reports/SAP-divestment-report-final.pdf> [<https://perma.cc/K4WT-EJRY>].

74. Examples of divestment platforms include DIVESTINVEST, <https://www.divestinvest.org/> [<https://perma.cc/9JKK-25LJ>], and GO FOSSIL FREE, <https://gofossilfree.org/wrap-up/> [<https://perma.cc/XMK2-BDJH>]. In late 2016 (on the one-year anniversary of the Paris Agreement), it was estimated that the value of assets represented by institutions and individuals committing to some sort of divestment from fossil fuel companies had reached \$5 trillion, with 688 institutions and 58,399 individuals across 76 countries committed to divest from fossil fuel companies. See ARABELLA ADVISERS, *THE GLOBAL FOSSIL FUEL DIVESTMENT AND CLEAN ENERGY INVESTMENT MOVEMENT 1* (2016), https://www.arabellaadvisors.com/wp-content/uploads/2016/12/Global_Divestment_Report_2016.pdf [<https://perma.cc/AG9D-UVC6>].

75. Climate Action 100+, the coalition of large institutional investors which has formed since the conclusion of the Paris Agreement, is an example of these dynamics. Climate Action 100+ is a five-year initiative led by investors to engage systemically important greenhouse gas emitters and other companies across the global economy that have significant opportunities to drive the clean energy transition and help achieve the goals of the Paris Agreement. This coalition of 296 investors, with nearly \$31 trillion in assets under management, is calling on these companies to improve governance on climate change, curb emissions, and strengthen climate-related financial disclosures. For an overview of this coalition's work, see CLIMATE ACTION 100+, <http://www.climateaction100.org> [<https://perma.cc/5DNP-KFYK>].

76. For a discussion of the recent broadening of climate change litigation campaign strategy to target and mobilize private actors, particularly corporations, investors, and other financial stakeholders, see Jacqueline Peel, Hari Osofsky & Anita Foerster, *Shaping the 'Next Generation' of Climate Change Litigation in Australia*, 41 *MELB. U. L. REV.* 793 (2017); Lisa Benjamin, *The Road to Paris Runs through Delaware: The Second Wave of 'Corporate' Climate Litigation, New Climate Regulation and Their Impacts on Directors' Duties and Corporate Governance* (unpublished manuscript on file with the *Indiana Law Journal*).

financial risks associated with climate change into account in their business and investment practices.

At face value, the divestment movement—and associated campaigns to improve corporate and investor disclosure of climate risk and internal action on energy transition—would seem to have enormous potential to shape the course of future climate change regulation. The core strategy seeks to harness companies' and investors' focus on financial risks and benefits (in addition to ethical considerations) to push for a move away from fossil fuel assets to greater investment in renewables and other cleaner energy sources.⁷⁷ The movement has garnered some high-profile successes—such as the divestment decision by the Rockefeller Fund and the Norwegian \$890 billion government pension fund's commitment to sell off many of its coal-related investments⁷⁸—and is increasingly noted for its rapid expansion compared to historical corporate divestment campaigns.⁷⁹ Nonetheless, its broader contribution to climate change regulation and energy transition remains unclear.

There are a number of important limitations and critiques raised in relation to fossil fuel divestment.⁸⁰ For example, the divestment movement is often seen as placing too much emphasis on removing funds from fossil fuels and too little on where these funds are reinvested. High profile critics, such as Microsoft's Bill Gates—whose charitable foundation has invested heavily in developing clean energy technologies—stress the need for the movement to think more broadly, with greater emphasis on reinvesting in clean energy:

If you think divestment alone is a solution, I worry you're taking whatever desire people have to solve this problem and kind of using up their idealism and energy on something that *won't* emit less carbon—because only a few people in society are the owners of the equity of coal or oil companies. As long as there's no carbon tax and that stuff is legal, everybody should be able to drive around. So I've been saying, "Hey, come on—broaden your message to be pro-R&D." And even the same people who are divesting those stocks of energy companies, ideally some of that money would come into this pool that is funding these high-risk innovations.⁸¹

77. For an analysis of the divestment movement's strategy, see Benjamin J. Richardson, *Divesting from Climate Change: The Road to Influence*, 39 *LAW & POL'Y* 325 (2017).

78. John Schwartz, *Norway Will Divest from Coal in Push Against Climate Change*, N.Y. TIMES (June 5, 2015), <http://www.nytimes.com/2015/06/06/science/norway-in-push-against-climate-change-will-divest-from-coal.html> [<https://perma.cc/6EPC-TDVP>].

79. Gunningham notes that the fossil fuel divestment movement has been widely recognized as the "fastest growing such anti-corporate campaign in history." Gunningham, *supra* note 73, at 312.

80. For a comprehensive evaluation of the strengths and weaknesses of the various rationales that are commonly put forward in favor of divestment, see Richardson, *supra* note 77 (focusing particularly on the direct effects of divestment on financial actors).

81. James Bennet, *We Need an Energy Miracle*, ATLANTIC (Nov. 2015) (emphasis in original), <http://www.theatlantic.com/magazine/archive/2015/11/we-need-an-energy-miracle/407881/> [<https://perma.cc/H9N9-HKH2>].

It is also unclear how much economic effect even widespread divestment would have on companies invested in fossil fuels. The primary concern is that so long as plenty of investors remain who do not care that their money will be used in a way that exacerbates climate change, even the most polluting companies will still be able to raise funds if those investments remain economically profitable. In addition, any divested stocks will be quickly purchased by less ethically concerned investors.⁸² For instance, analysis of one of the most prominent shareholder and legislative boycotts involving considerable divestment—the U.S. boycott of South Africa’s apartheid regime in the 1980s and early 1990s⁸³—suggests that the campaign had “little discernible effect either on the valuation of banks and corporations with South African operations or on the South African financial markets.”⁸⁴ The cost of capital for South African firms and the government did increase somewhat in the 1980s, but a drop in the price of gold (a major export) may have played a bigger role.⁸⁵ The Israel divestment movement of the past decade also does not seem to have raised the cost of capital for Israeli firms at all.⁸⁶

The divestment movement occurs in the broader context of a range of legal efforts to push companies to consider carbon risks, which are the focus of the sections that follow in this Part. In that context, divestment may help to provide both public pressure and a sense of major leaders’ commitment to these issues that are important to the overall energy transition reinvestment effort. Even without a direct economic impact on targeted fossil fuel companies in the short term, high-profile divestment

82. Julie Ayling and Neil Gunningham, *Non-State Governance and Climate Policy: The Fossil Fuel Divestment Movement*, 17 CLIMATE POL’Y 131, 141 (2015).

83. There is limited empirical analysis available and these comments rely on findings from a small number of studies only, which present somewhat equivocal assessments of the impacts of divestment in South Africa on firm value. See Abigail McWilliams, Donald S. Siegel & Patrick M. Wright, *Corporate Social Responsibility: Strategic Implications*, 43 J. MGMT. STUD. 1, 11–12 (2006).

84. A good example of this assessment, which presents empirical evidence to counter the strong public and media rhetoric surrounding the power of divestment is: Siew Hong Teoh, Ivo Welch & C. Paul Wazzan, *The Effect of Socially Activist Investment Policies on the Financial Markets: Evidence from the South African Boycott*, 72 J. BUS. 35, 35 (1999). In this article, the authors document the size of U.S. corporate involvement in South Africa and examine the impact on prices and institutional shareholdings of the voluntary divestment decisions of U.S. firms with South African operations. Investments by public firms in South Africa were found to be small, as were price reactions to the announcement of pressure and divestitures. “Therefore, potential lost economic opportunities through the boycott were too small to be statistically or economically significant.” *Id.* at 38. The authors note that the demand for stocks is driven by many investors, from many countries, with many different preferences, meaning that divestment from large firms or entire sectors by even a large number of U.S. institutions made very little difference to stock values. They conclude that “the evidence indicates that it is unlikely that political shareholder activism has large wealth consequences.” *Id.* at 39. For an alternative assessment, see Peter Wright & Stephen P. Ferris, *Agency Conflict and Corporate Strategy: The Effect of Divestment on Corporate Value*, 18 STRATEGIC MGMT. J. 77, 77–83 (1997).

85. *Fight the Power*, THE ECONOMIST (June 25, 2015), <https://www.economist.com/news/finance-and-economics/21656204-investors-are-being-pressed-sell-their-holdings-coal-oil-and-gas-fight> [<https://perma.cc/P9FR-DCXN>].

86. *Id.*

by investors can play an important role in discrediting and stigmatizing companies and industries, and in building pressure on governments and industry to hasten the shift to clean energy technology.⁸⁷

Importantly, however, the divestment movement also faces a number of legal obstacles. Many institutional investors, such as universities and charities that are facing the most pressure to divest, may arguably have a legal duty to get the highest risk-adjusted financial return possible on their portfolios. If divesting produces lower returns, that could lead to legal challenges. Insofar as major classes of institutional investors face legal limits on their discretion to divest, that could be a significant obstacle to the success of the movement. This Section considers three important classes of investors—nonprofit organizations, pension funds, and mutual funds—to explore this issue.

1. Nonprofit Organizations

A major target of the divestment movement has been universities, which are largely nonprofit organizations.⁸⁸ Nonprofits are typically organized either as nonprofit corporations or as trusts.⁸⁹ They are governed by state statutes, much like for-profit corporations.⁹⁰ However, the ABA's Model Nonprofit Corporation Act⁹¹ has been influential and widely adopted.

Nonprofit corporations are managed by their boards of directors and officers, as in ordinary corporations. Trusts are a creation of common law and managed by trustees; the standard reference work, with considerable persuasive authority for courts, is the Restatement (Third) of Trusts.⁹² That law has now been codified in

87. Indeed, the divestment movement itself acknowledges that divestment is unlikely to have any short-term effect on the valuation of fossil fuel companies and posits the strategy as moral and political rather than economic. As Gunningham writes,

[T]hese matters, however, are of little concern to the movement because it views pressuring vulnerable institutional investors as primarily a vehicle through which to achieve its main goal(s): . . . raising awareness of the climate change crisis and of the role played by fossil fuel extracting companies in precipitating it, and labeling these companies as morally reprehensible . . . to bring about a value shift not just among institutional investors but also, and more importantly, within the wider public and, by so doing, to precipitate effective action by nation states.

Gunningham, *supra* note 73, at 311; *see also* ANSAR ET AL., *supra* note 73, at 34–36.

88. For an outstanding analysis of the legality of socially responsible investment by nonprofits, see Susan N. Gary, *Is It Prudent to Be Responsible? The Legal Rules for Charities that Engage in Socially Responsible Investing and Mission Investing*, 6 NW. J. L. & SOC. POL'Y 106 (2011).

89. MARION R. FREMONT-SMITH, GOVERNING NONPROFIT ORGANIZATIONS: FEDERAL AND STATE LAW AND REGULATION 116–17 (2004).

90. *See id.* at 133–73.

91. MODEL NONPROFIT CORP. ACT (AM. BAR ASS'N 2008). On adoption by states, see Michael E. Malamut, *Summary of Sources of State Nonprofit Corporation Laws*, National Parliamentarian, 2d Quarter, 2008, http://www.michaelmalamut.com/articles/2008q2_-_sources_of_nonprofit_laws.pdf [<https://perma.cc/KGC6-Z2JT>].

92. RESTATEMENT (THIRD) OF TRUSTS (AM. LAW INST. 2018).

many states, and so this Section treats the Uniform Trust Code⁹³ as a typical statement of that law.

The directors and officers of nonprofit corporations and the trustees of trusts are subject to the duty of loyalty.⁹⁴ This means that they must make decisions in the sole interests of the beneficiaries of the corporation or trust. When nonprofit charities invest their endowments, their directors or trustees must make decisions about how to invest those funds. Those investment decisions are subject to the duty of loyalty. Traditionally, in the investment context, that duty has been understood to require consideration of only risk-adjusted financial returns.⁹⁵ More recently, some commentators argue that fiduciaries may take into account the nonfinancial interests of their beneficiaries or the stated social goals of a charity in determining the organization's best interests when investing.⁹⁶ Though courts have given little guidance, some official commentary supports this position.⁹⁷

Nonprofits are also subject to the duty of care, requiring them to make prudent decisions.⁹⁸ Beyond the general provisions of their organizational statutes and the common law, when it comes to investment decisions, charities are subject to several specific statutes governing prudent investment. The Uniform Prudent Investor Act (UPIA) applies to trusts, while the Uniform Management of Institutional Funds Act (UMIFA) and the Uniform Prudent Management of Institutional Funds Act (UPMIFA) apply to nonprofit corporations.⁹⁹ The acts all require fiduciaries to act with the care of an ordinarily prudent person under similar circumstances. In doing so, they may consider the charitable purposes of the trust or corporation, including nonfinancial preferences of beneficiaries.¹⁰⁰

Thus, the various statutory and common law rules that apply to the fiduciaries of nonprofit corporations and charitable trusts do allow them to take into account nonfinancial interests when making investment decisions. However, they may do so only to the extent they are related to the interests of the organization's beneficiaries or purposes. For some nonprofits, their purposes may be clearly related to

93. UNIF. TRUST CODE (UNIF. LAW COMM'N 2010). On adoption by states, see *Acts*, UNIF. LAW COMM., <http://www.uniformlaws.org/Act.aspx?title=Trust%20Code> [<https://perma.cc/8EJM-B5ET>].

94. MODEL NONPROFIT CORP. ACT § 8.30(a) (AM. BAR ASS'N 2008); UNIF. TRUST CODE § 802(a) (UNIF. LAW COMM'N 2010); RESTATEMENT (THIRD) OF TRUSTS § 78(1) (AM. LAW INST. 2018).

95. Gary, *supra* note 88, at 114; John H. Langbein & Richard A. Posner, *Social Investing and the Law of Trusts*, 79 MICH. L. REV. 72, 96 (1980).

96. Gary, *supra* note 88, at 115.

97. See RESTATEMENT (THIRD) OF TRUSTS § 90 cmt. c (AM. LAW INST. 2018) (“[S]ocial considerations may be taken into account in investing the funds of charitable trusts to the extent the charitable purposes would justify an expenditure of trust funds for the social issue or cause in question or to the extent the investment decision can be justified on grounds of advancing, financially or operationally, a charitable activity conducted by the trust.”)

98. FREMONT-SMITH, *supra* note 89, at 187–95, 199–215.

99. Gary, *supra* note 88, at 117–19.

100. UNIF. PRUDENT INVESTOR ACT § 2(a), (c) (UNIF. LAW COMM'N 1994); UNIF. PRUDENT MGMT. INSTITUTIONAL FUNDS ACT § 3(a), (e) (UNIF. LAW COMM'N 2006). For more detailed analysis, see Gary, *supra* note 88, at 118–19. Gary was the Reporter for the UPMIFA.

environmental or sustainability goals,¹⁰¹ allowing them to consider whether a target investment helps or hinders energy transition even where doing so might decrease expected financial returns. For others, the connection to purpose may be harder to make. Is there any relationship between combating climate change and the educational purpose of a university, for example?

Of course, even if there is no plausible connection to charitable purpose, nonprofit fiduciaries may consider climate change effects to the extent that they reasonably believe those may affect the financial returns and risks of an investment. Those effects are disputed. The academic literature is rather extensive. Some studies find a positive financial return for various forms of socially responsible investing, including strategies focused on sustainability and environmental concerns, some find negative financial returns, and some find no statistically significant effect. Most studies do not show a clear negative effect, which should be helpful for investment managers trying to defend the use of social indicators.¹⁰²

It matters, then, how closely courts and other regulators may scrutinize the reasonableness of financial decisions. Traditionally, those decisions have not received the extreme deference that corporate managers receive under the business judgment rule. The UPIA, UMIFA, and UPMIFA state tort-like negligence standards, apply professional investment manager expertise expectations, and give a fairly detailed structure for evaluating investment prudence.¹⁰³ However, that structure is based on modern portfolio theory, emphasizing risk and diversification and looking at the portfolio as a whole. There should be room to justify concern with climate change effects, as long as financial analysis shows genuine risk.

In addition to these state law duty constraints, there are also federal tax considerations for private foundations.¹⁰⁴ Both private foundations and their managers are subject to excise taxes on the amount of investments that jeopardize their charitable purpose.¹⁰⁵ An investment jeopardizes charitable purpose if its expected return is overly low relative to the risks it poses. IRS regulation defines jeopardizing investments in terms of “ordinary business care and prudence,”¹⁰⁶ similar to the fiduciary duty standard. It is not very precise. In some ways, the tax rules may be of more concern to affected foundations than the state law fiduciary duties. In many cases, there may be no disinterested private party with standing (and incentive) to sue to discipline a violation of the fiduciary rule. State Attorneys General may enforce, but in most states, they do not have the staffing or interest to

101. See, e.g., ENVTL. DEF. FUND, <https://www.edf.org/> [<https://perma.cc/DT5J-46WW>]; NATURE CONSERVANCY, <https://www.nature.org/> [<https://perma.cc/8LS3-E8UQ>].

102. For a recent meta-analysis of 53 empirical studies, see Miriam von Wallis & Christian Klein, *Ethical Requirement and Financial Interest: A Literature Review on Socially Responsible Investing*, 8 BUS. RES. 61 (2015). Von Wallis and Klein also reference and briefly discuss earlier meta-studies and literature reviews. See *id.* at 71.

103. See Gary, *supra* note 88, at 117–21.

104. A subset of organizations among the broader universe of nonprofits that are exempt from income taxation.

105. I.R.C. § 4944 (2012).

106. Treas. Reg. § 53.4944-1(a)(2) (1972).

do so (until a violation receives enough publicity, at any rate).¹⁰⁷ The tax rules, in contrast, are enforced by the IRS, which regularly gathers financial data.

Ultimately, it is not clear that the chances of attracting the IRS's attention for jeopardizing investments or the State Attorney General's attention for potential state fiduciary law violations are very high outside the most extreme of cases, but even small risks may discourage those who manage the endowments of private foundations, especially since the managers themselves are subject to an excise tax.

Divesting from established fossil fuel companies is probably less legally risky than *investing* in start-up renewable energy companies. Energy companies are significant but still overall a quite modest part of the total market capitalization of publicly-traded U.S. corporations.¹⁰⁸ Divesting from this one sector leaves investment managers with most of the market still available as a place to put their funds. By contrast, investing in risky start-up clean energy companies (a strategy that is the focus of Part III) poses more visible risk of losing money on a specific investment. The IRS could well notice that. Knowing this, investment managers may well shy away from such investments if they see them as too financially risky.

2. Pension Funds

Another important type of institutional investor is pension funds.¹⁰⁹ These are investment pools created to fund the retirement pensions of employees on defined benefit plans. Such plans pay out a specified amount of money, based on a contractual formula, to their retirees. Money must be set aside to ensure that enough will be available to make the promised payments.¹¹⁰ How much needs to be set aside, and how to invest that money until it is needed, are extremely complex questions. If those managing a fund make the wrong decisions, there will not be enough to pay what is required.

At times, some of the fiduciaries who manage pension funds may be either incompetent or tempted to make overly optimistic assumptions about returns on investment, so that the employers (or unions) who created the funds need not set aside as much money. As a consequence, many pension funds have been underfunded.¹¹¹ In response to this problem, the Employment Retirement Income Security Act of 1974 (ERISA) was passed.¹¹²

107. FREMONT-SMITH, *supra* note 89, at 305–11; see CINDY M. LOTT, ELIZABETH T. BORIS, KARIN KUNSTLER GOLDMAN, BELINDA J. JOHNS, MARCUS GADDY & MAURA FARRELL, URBAN INST., STATE REGULATION AND ENFORCEMENT IN THE CHARITABLE SECTOR 18–24 (2016), <https://www.urban.org/sites/default/files/publication/84161/2000925-State-Regulation-and-Enforcement-in-the-Charitable-Sector.pdf> [<https://perma.cc/FLJ8-8C5A>].

108. Power Shift Network estimates that fossil fuel related companies represented about 13% of U.S. stock market capitalization in 2013. Dan Apfel, *Does My University Invest in Fossil Fuels?*, POWER SHIFT NETWORK, <http://powershift.org/campaigns/divest/campaigns>.

109. See generally Henry H. Drummonds, *The Aging of the Boomers and the Coming Crisis in America's Changing Retirement and Elder Care Systems*, 11 LEWIS & CLARK L. REV. 267 (2007).

110. See *id.* at 276–81.

111. See *id.* at 276–81.

112. Employee Retirement Income Security Act of 1974 (ERISA), Pub. L. No. 93-406, 88 Stat. 829 (1974) (codified at 29 U.S.C. §§ 1001–1461 (2012)).

ERISA imposes a number of strict, detailed rules on the plans that it covers.¹¹³ Among these are strict fiduciary duty rules, including the duties of loyalty and care, both in general and with specific rules on prohibited conflict of interest transactions and on diversification and other principles of prudent investing.¹¹⁴ ERISA says that in carrying out these duties, fiduciaries must act “for the exclusive purpose of providing benefits to participants and their beneficiaries; and defraying reasonable expenses of the plan”¹¹⁵

That “exclusive purpose” language raises obvious obstacles to ERISA beneficiaries taking nonfinancial concerns into account. As always, to the extent that energy transition issues pose genuine concerns about future financial returns, fiduciaries can take those concerns into account. But can they go beyond that?

The Department of Labor, which administers ERISA, has issued guidance on this point in several interpretive bulletins. That guidance provides only limited flexibility for considering the social effects of investments. The Department first addressed this issue in 1994 in Interpretive Bulletin 94–1,¹¹⁶ then again in 2008 in Interpretive Bulletin 2008–1,¹¹⁷ once again in 2015 in Interpretive Bulletin 2015–01,¹¹⁸ and most recently in Field Assistance Bulletin No. 2018–01.¹¹⁹

All four bulletins agree on basic principles. Above all, “the focus of plan fiduciaries on the plan’s financial returns and risk to beneficiaries must be paramount.”¹²⁰ Fiduciaries cannot accept below market returns or above market risks in order to achieve social or environmental goals. They can, however, take such nonfinancial goals as tiebreakers in choosing among investments that are equally

113. Pension funds established by government entities and churches are not covered. Certain public employee pension funds have been leaders in the activist institutional investor movement (e.g. California Public Employees’ Retirement System (CalPERS), the California state employee pension fund). The ERISA rules discussed here thus do not apply to funds like CalPERS, although other sources of fiduciary duty limits presumably do apply. Indeed, the California legislature has ordered its state pension funds to divest from certain coal companies, but with the proviso that they should not if doing so would conflict with their fiduciary duties. So far, CalPERS has resisted divestment calls. *See* Indep. Petrol. Ass’n of Am., *The Nation’s Largest Public Pension, CalPERS, Is Fighting Latest Divestment Push*, DIVESTMENTFACTS.COM (Apr. 7, 2016), <http://divestmentfacts.com/the-nations-largest-public-pension-calpers-is-fighting-latest-divestment-push/> [<https://perma.cc/ZAR6-P88B>].

114. *See* 29 U.S.C. § 1104 (2012).

115. 29 U.S.C. § 1104(a)(1)(A) (2012).

116. *See* Interpretive Bulletin Relating to the Employee Retirement Income Security Act of 1974 (ERISA), 59 Fed. Reg. 32606 (June 23, 1994) (codified at 29 C.F.R. pt. 2509).

117. Interpretive Bulletin Relating to Investing in Economically Targeted Investments, 73 Fed. Reg. 61734 (Oct. 17, 2008) (codified at 29 C.F.R. pt. 2509).

118. *See* Interpretive Bulletin Relating to the Fiduciary Standard Under ERISA in Considering Economically Targeted Investments, 80 Fed. Reg. 65135 (Oct. 26, 2015) (codified at 29 C.F.R. pt. 2509).

119. *See* Memorandum from John J. Canary, Dir. of Regulations & Interpretations, Dep’t of Labor, to Mabel Capolongo, Dir. of Enf’t, Emp. Benefits Sec. Admin. (Apr. 23, 2018), [hereinafter Field Assistance Bulletin No. 2018–01], <https://www.dol.gov/agencies/ebsa/employers-and-advisers/guidance/field-assistance-bulletins/2018-01> [<https://perma.cc/85AC-CRYK>].

120. Interpretive Bulletin Relating to the Fiduciary Standard Under ERISA in Considering Economically Targeted Investments, 80 Fed. Reg. at 63135.

good from a financial point of view.¹²¹ The four bulletins differ somewhat in their exact rhetoric, guidance, and discussion of procedures. The 2015 bulletin argues that the 2008 bulletin was overly discouraging, treating appropriate use of social and environmental concerns as something that should be quite rare. The 2015 bulletin emphasizes that social and environmental concerns may quite well be relevant to considering future financial returns and are also appropriate as tiebreakers. It tells fiduciaries that they may appropriately consider and use metrics of social and environmental performance, while still acknowledging that financial return must remain paramount.¹²²

Predictably, following another change in administration and political party, the most recent 2018 bulletin once again takes a more constricting approach to the extent to which fiduciaries can consider social policy goals.

Fiduciaries must not too readily treat ESG factors as economically relevant to the particular investment choices at issue when making a decision. It does not ineluctably follow from the fact that an investment promotes ESG factors, or that it arguably promotes positive general market trends or industry growth, that the investment is a prudent choice for retirement or other investors. Rather, ERISA fiduciaries must always put first the economic interests of the plan in providing retirement benefits.¹²³

As a result of this guidance, plans subject to ERISA can consider the environmental and social impact of their investments, and in particular the effects on energy transition. However, they must be quite careful how they do so, and consequently they would appear quite unlikely to become leaders of the divestment movement, or aggressive players in it.

3. Mutual Funds

Investment advisers of mutual funds are an additional important category of investment fiduciary. Mutual funds own a large fraction of the shares and bonds of publicly-traded companies.¹²⁴ In addition to being governed by state fiduciary duty law, based on the type of business association they choose to be and the state in which they register, they are subject to extensive federal securities regulation under the Investment Company Act of 1940.¹²⁵ There is a provision giving the SEC the ability to sue to enforce violations of fiduciary duty,¹²⁶ as well as a prohibition of transactions with various sorts of affiliated persons, which aims at conflicts of interests.¹²⁷

121. *Id.* at 65136.

122. *Id.* at 65136–37

123. Field Assistance Bulletin No. 2018-01, *supra* note 119.

124. MICHAEL S. BARR, HOWELL E. JACKSON & MARGARET E. TAHYAR, FINANCIAL REGULATION: LAW AND POLICY 11 (2016).

125. Investment Company Act of 1940, Pub. L. 76-768, 54 Stat. 789 (1940) (codified as amended at 15 U.S.C. §§ 80a-1 to 80a-64 (2012)).

126. 15 U.S.C. § 80a-36 (2012).

127. 15 U.S.C. § 80a-17 (2012).

The proscription against transactions with affiliates is strictly enforced, but the duty provision is much less so. Occasionally, excessive compensation to investment advisers is struck down, but not often.¹²⁸ Fiduciary duties are generally not used to police the prudence of investment decisions where advisers have no financial conflict of interest. Rather, the focus of the 1940 Act, like U.S. securities regulation generally, is on disclosure. Funds must disclose in detail the nature of their investment strategies.¹²⁹ Failure to follow their stated strategy may lead to a suit claiming securities fraud, and the ability to change strategies is limited.¹³⁰ But as long as funds state in their strategies that they will consider, in specified ways, whatever environmental and social concerns they wish, and act in accordance with their stated strategies, they may do so, as evidenced by the fact that funds that explicitly follow socially responsible investment strategies are now a significant part of the mutual fund industry.¹³¹

Thus, ERISA fiduciaries are the most constrained, nonprofits are significantly constrained but less than ERISA fiduciaries (especially insofar as the environmental and social goals at stake are related to the charitable purposes of a particular nonprofit), and mutual fund managers are the least constrained, as long as they disclose the strategies they are following. Even those most legally constrained to focus only on financial returns will still have a quite plausible argument that given the risks surrounding climate change, divesting from companies invested heavily in fossil fuels is defensible as an investment strategy in the long run. Although the legal obstacles exist, especially for some categories of investors, many investors should be able to divest if they so choose (and a number of them seem to be making that choice).

The bigger issue, as noted above, is the ability of that movement to raise the cost of capital for targeted companies. However, divestment's role in shifting social norms may pair well with other strategies discussed in this Article to advance energy transition.

B. Corporate Disclosure of Climate Risk

The corporate reporting and disclosure requirements under federal securities law require listed companies to disclose information that presents a true and fair representation of their financial position to the market, via periodic reporting and in other communications such as offer documents (e.g. prospectuses, fundraising, and

128. See, e.g., *Jones v. Harris Assocs., L.P.*, 559 U.S. 335 (2010).

129. *The Laws That Govern the Securities Industry: Investment Company Act of 1940*, U.S. SEC. & EXCH. COMM'N, <https://www.sec.gov/answers/about-lawsshtml.html#invcoact1940> [<https://perma.cc/X6TP-EKUT>] (last modified Oct. 1, 2013) (“The focus of this Act is on disclosure to the investing public of information about the fund and its investment objectives, as well as on investment company structure and operations. It is important to remember that the Act does not permit the SEC to directly supervise the investment decisions or activities of these companies or judge the merits of their investments.”).

130. See 15 U.S.C. § 80a-13 (2012).

131. See *SRI Basics*, US SIF: THE FORUM FOR SUSTAINABLE & RESPONSIBLE INV., <http://www.ussif.org/sribasics> [<https://perma.cc/7KDD-ARBZ>]. According to the Forum for Sustainable and Responsible Investment, 22% of assets under professional management in the United States today are invested in socially responsible funds. *Id.*

takeover documents) and investor briefings.¹³² Corporate disclosures provide information that enables market participants (such as investors, creditors, insurers, customers, and suppliers) to make an informed assessment about the risks and opportunities faced by a particular company. With increasing recognition of the business risks posed by climate change across all sectors of the economy,¹³³ these disclosure requirements offer an indirect tool to provide information to influence the decision-making of these market participants and companies themselves in favor of energy divestment or reinvestment.

The business risks posed by climate change are complex and numerous, and their materiality will differ significantly depending on the nature of the business, its size and level of diversification as well as the timeframes adopted for consideration of climate risks. Climate risks are now commonly classified as physical risks or nonphysical/transition risks.¹³⁴ Physical risks arise as a result of the impacts of climate change (e.g., extreme weather events, changed water availability, and sea level rise) on company assets, operations, and supply chains.¹³⁵ Nonphysical (or transition) risks refer to a range of legal, technological, market, and reputational risks.¹³⁶ For example, new laws and policies introduced to address climate change, will potentially lead to compliance costs and liabilities, restrictions on the use of carbon-intensive assets, and asset stranding. Changing market conditions and technological developments (such as the rise of battery storage and other decentralized energy technologies) will further threaten the business models of carbon-intensive industries, such as traditional energy generators and utilities. Litigation brought against companies by both private and public parties (e.g., claims seeking to establish liability for carbon emissions or climate change impacts,¹³⁷ or claims arising from failures to disclose climate risks or take them into account in

132. See Securities Exchange Act of 1934, Pub. L. 73–291, 48 Stat. 881 (1934) (codified as amended at 15 U.S.C. §§ 78a–78qq (2012)). The Act establishes the SEC and outlines its functions, including empowering the SEC to require periodic reporting of information by companies with publicly traded securities. See *id.* § 13, 48 Stat. at 894–95. Further details of applicable rules are discussed below.

133. TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD), PHASE ONE REPORT 7 (2016).

134. This classification is adopted by the Taskforce on Climate-Related Financial Disclosures. *Id.* at 24. It has since been used by numerous leading financial institutions. See, e.g., MATTHEW SCOTT, JULIA VAN HUIZEN & CARSTEN JUNG, BANK OF ENGLAND, QUARTERLY BULLETIN: THE BANK OF ENGLAND'S RESPONSE TO CLIMATE CHANGE 100–04 (2017).

135. TCFD, *supra* note 133, at 24 tbl. 3b.

136. *Id.*

137. For example, claims filed in July 2017 by three Californian municipalities against thirty-seven major fossil fuel companies sought compensatory damages (for the cost of assessing climate impacts and adaptive civil works) and punitive damages for climate change impacts caused by the business activities of these companies. See *County of Marin v. Chevron*, Case No. CIV1702586 (Cal. Super. Ct. filed July 17, 2017). For an update on the progress of these cases, see Rob Jordan, *Stanford Law and Science Experts Discuss Court Case That Could Set Precedent for Climate Change Litigation*, STANFORD: NEWS (Mar. 30, 2018), <https://news.stanford.edu/2018/03/30/case-questions-climate-change-culpability/> [https://perma.cc/RVM4-65JT].

decision-making¹³⁸) may also impact a company's earnings and liabilities as well as a company's reputation and social license to operate.¹³⁹

Corporate disclosure of climate risk can potentially drive or support divestment and reinvestment decisions in three ways. First, reporting climate-related risks is thought to focus a company's attention internally on developing risk management strategies (which may include divesting carbon-intensive assets) and harnessing associated market opportunities (such as accelerating investments in technological innovation and clean energy).¹⁴⁰ Second, climate risk disclosure provides information to investors and other market participants, who are increasingly seeking targeted, decision-ready information to support longer term investment decisions and address concerns about the climate risk exposure of their portfolios.¹⁴¹ Third, full and timely risk disclosure is regarded as crucial to market transparency and efficiency, and can help to maintain economic stability and resilience.¹⁴² Mainstream international financial institutions are increasingly cautious about the risks posed to global financial stability by climate change, particularly where abrupt transitions take place.¹⁴³ These institutions have been strong supporters of a well-managed, gradual transition to a clean energy economy, supported by effective and consistent disclosure of financial risks associated with climate change.

Federal securities law requires all listed companies to file quarterly reports with the Securities and Exchange Commission (SEC) detailing their financial position and identifying any material risks facing their business.¹⁴⁴ In 2010, the SEC issued

138. See further discussion below of regulatory investigations of alleged security fraud and related private claims brought against fossil fuel companies such as ExxonMobil.

139. MINTER ELLISON & 2 DEGREES INVESTING INITIATIVE, *THE CARBON BOOMERANG: LITIGATION AS A DRIVER AND A CONSEQUENCE OF THE ENERGY TRANSITION* 6 (2017); TASKFORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD), *RECOMMENDATIONS OF THE TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES* 8 (2016); Peter Seley & Richard Dudley, *Emerging Trends in Climate Change Litigation*, LAW 360 (March 7, 2016), <http://www.law360.com/articles/766214/emerging-trends-in-climate-change-litigation> [<https://perma.cc/PE89-PHZN>].

140. See Jane Andrew & Corinne L. Cortese, *Carbon Disclosures: Comparability, the Carbon Disclosure Project and the Greenhouse Gas Protocol*, 5 AUSTRALASIAN ACCT., BUS. AND FIN. J., no. 4, 2011, at 5; Nigel Topping, *Carbon Disclosure Project, How does Sustainability Disclosure Drive Behavior Change?*, 24 J. APPLIED CORP. FIN. (2012).

141. TCFD, *supra* note 139, at 3.

142. TCFD, *supra* note 139, at 8; Mark Carney, Governor, Bank of Eng., Chairman, Fin. Stability Bd., *Speech at Lloyd's of London: Breaking the Tragedy of the Horizon – Climate Change and Financial Stability* (September 29, 2015), <https://www.bankofengland.co.uk/-/media/boe/files/speech/2015/breaking-the-tragedy-of-the-horizon-climate-change-and-financial-stability.pdf?la=en&hash=7C67E785651862457D99511147C7424FF5EA0C1A> [<https://perma.cc/5T8Z-BFMC>] (last visited Jan. 30, 2018).

143. This is well illustrated by the establishment of the Taskforce on Climate-related Financial Disclosures by the Financial Stability Board (FSB) of the G20 in 2015. The FSB is an international body that monitors and makes recommendations about the global financial system. Its mandate is to promote international financial stability by coordinating national financial authorities and international standard-setting bodies as they work toward developing strong regulatory, supervisory, and other financial sector policies. *About the FSB*, FINANCIAL STABILITY BOARD, <http://www.fsb.org/about> [<https://perma.cc/DD6D-BTJR>].

144. 17 C.F.R. § 229.601 (2002). Securities Act Rule 408 and Exchange Act Rule 12b-20

specific guidance on how these disclosure requirements applied to climate change matters.¹⁴⁵ The SEC guidance highlighted the particular rules likely to trigger requirements to disclose climate risks¹⁴⁶ and provided a range of examples of climate change-related issues that may require consideration.¹⁴⁷ These examples span both physical and nonphysical transition risks, with the latter including the need to comply with changing climate regulatory requirements, the indirect effects of those requirements, and business trends that include declining demand for carbon intensive products.¹⁴⁸

Immediately following the issuance of SEC guidance, corporate disclosure of climate risks in quarterly reports increased significantly.¹⁴⁹ Subsequently, however, concerns have been raised about the quality and impact of this disclosure. Although more companies mentioned climate change in their reports, their actual disclosures were often brief and lacking in substance.¹⁵⁰ An analysis of 2014 financial filings by top U.S. listed companies found that “27% of companies identified no material climate risk at all. Of the approximately 70% that did, only 15% used metrics, and approximately 40% used boilerplate language—broad, nonspecific wording that does not describe the realities of the reporter’s particular operating context.”¹⁵¹ Climate risk disclosure by fossil fuel companies has been particularly scrutinized. For example, an analysis of disclosures made by ten of the world’s largest publicly traded oil and gas companies found them to be “generally inadequate to allow investors to conduct complete and accurate assessments of risks and future performance.”¹⁵² According to the authors of this analysis, the companies investigated were making extensive capital investments related to climate change

also require a registrant to disclose, in addition to the information expressly required by Commission regulation, “such further material information, if any, as may be necessary to make the required statements, in light of the circumstances under which they are made, not misleading.” 17 C.F.R. § 230.408 (2018); 17 C.F.R. § 240.12b-20 (2018).

145. Commission Guidance Regarding Disclosure Related to Climate Change Release, Exchange Act, 75 Fed. Reg. 6290 (Feb. 8, 2010) (to be codified at 17 C.F.R. pts. 211, 231, 241).

146. *Id.*; see Sections III.A–E.

147. Commission Guidance Regarding Disclosure Related to Climate Change Release, Exchange Act, 75 Fed. Reg. 6290 (Feb. 8, 2010) (to be codified at 17 C.F.R. pts. 211, 231, 241).

148. Commission Guidance Regarding Disclosure Related to Climate Change Release, Exchange Act, 75 Fed. Reg. 6290 (Feb. 8, 2010) (to be codified at 17 C.F.R. pts. 211, 231, 241)

149. See JIM COBURN & JACKIE COOK, CERES, COOL RESPONSE: THE SEC & CORPORATE CLIMATE CHANGE REPORTING 11–12 (2014).

150. *Id.* See also David Gelles, *SEC is criticised for Lax Enforcement of Climate Risk Disclosure*, N.Y. TIMES (Jan. 23, 2016), http://www.nytimes.com/2016/01/24/business/energy-environment/sec-is-criticized-for-lax-enforcement-of-climate-risk-disclosure.html?_r=0 [<https://perma.cc/5A2G-CYDK>].

151. TCFD, *supra* note 139, at 17 (referring to data from the Sustainability Accounting Standards Board (SASB)).

152. JIM COBURN, RYAN SALMON & DAVE GROSSMAN, SUSTAINABLE EXTRACTION?: AN ANALYSIS OF SEC DISCLOSURE BY MAJOR OIL & GAS COMPANIES ON CLIMATE RISK & DEEPWATER DRILLING RISK 2 (2012).

that carried material financial risks, but were generally failing to disclose them adequately consistent with SEC rules and growing investor expectations.¹⁵³

These outcomes suggest that, for many companies, corporate disclosure obligations are not necessarily supporting changed corporate decision-making, nor is the disclosure of climate risks within SEC filings of a sufficient quality to provide useful information to investors to drive divestment decisions. This has been partially attributed to inadequate compliance activity by the SEC: “[C]omment letters over the last four years show minimal attention by the SEC to climate risk as a disclosure issue and do not reveal an ongoing SEC commitment to implement the Guidance.”¹⁵⁴

However, prevailing regulatory and policy uncertainties in the United States, and more broadly, have undoubtedly also played a role—even during the Obama Administration’s extensive federal regulatory efforts. The business implications (and hence the materiality of associated business risks) of the Paris Agreement and the Trump Administration’s withdrawal from it remain unclear. While the Trump Administration has been rolling back many relevant areas of federal regulation, other nations continue to move forward, and many U.S. states are proceeding in line with the pledges that the Obama Administration made.¹⁵⁵ Investment risks are likely to remain highly speculative unless significantly stronger domestic laws and policies are put in place that signal compliance costs and liabilities and the market responds definitively.

In the absence of strong enforcement action by the SEC, there has been considerable agitation by public and private parties to test the extent of disclosure requirements and their capacity to drive change in corporate and investor decision-making. In the United States, this has been led by state regulators who have considerable powers under state securities fraud statutes to investigate and sue companies for misleading or fraudulent behavior.¹⁵⁶

For example, in one of the first of these actions, the New York Attorney General investigated the SEC filings from 2011 to 2014 from Peabody Energy Corporation (the world’s largest publicly traded coal company),¹⁵⁷ found that these disclosures

153. *Id.* at 1.

154. *See* COBURN & COOK, *supra* note 150, at 25; Gelles, *supra* note 150.

155. Thousands of mayors, governors, tribal leaders, CEOs, and university presidents have signed the “We Are Still In” declaration, signaling their enduring commitment to the Paris Agreement and the United States’ contribution to it. *See* WE ARE STILL IN <https://www.wearestillin.com/signatories> [<https://perma.cc/YH28-QEXR>].

156. The powers conferred on state regulators under these statutes coexist with the powers of the Securities and Exchange Commission under the Securities Act of 1933 and the Securities Exchange Act of 1934. For a discussion of the strong investigative powers and extensive penalties available under state-level laws, see, Aaron A. Tidman, *Securities Law Enforcement in the Twenty-First Century: Why States Are Better Equipped Than the Securities and Exchange Commission to Enforce Securities Law*, 57 SYRACUSE L. REV. 379, 391 (2007).

157. *See* Press Release, N.Y. State Office of the Attorney Gen., A.G. Schneiderman Secures Unprecedented Agreement with Peabody Energy to End Misleading Statements and Disclose Risks Arising From Climate Change (Nov. 9, 2015), <http://www.ag.ny.gov/press-release/ag-schneiderman-secures-unprecedented-agreement-peabody-energy-end-misleading> [<https://perma.cc/V6KU-CKSB>]. Prior to this investigation, the previous New York Attorney General conducted a number of investigations of other energy companies and pursued agreements with these companies to disclose the risks of climate change in SEC filings. *See*

misled shareholders by understating the severe potential impacts of climate change risks to its business,¹⁵⁸ and claimed an inability to predict the financial impacts of future climate policy laws or regulations.¹⁵⁹ This investigation, brought under the New York Martin Act (one of the strongest state securities fraud statutes in terms of investigative powers and available penalties) was settled in November 2015.¹⁶⁰ While Peabody did not admit to fraudulent disclosure practices, the company did undertake to improve climate risk disclosure substantially.¹⁶¹

Over the course of 2016, the New York Attorney General, along with many other U.S. state attorney generals, launched similar securities fraud investigations into the reporting practices of Exxon Mobil, alleging the company had misled the market by repeatedly and deliberately concealing the financial risks posed by climate change to its business.¹⁶² These investigations have focused particularly on Exxon's actions in publicly promoting climate science skepticism and uncertainty while privately acknowledging the legitimacy of the science and the significant potential impacts of climate change on the Exxon business model.¹⁶³ In September 2016, it was reported that the SEC had also begun investigating the disclosure practices of Exxon and its auditor Price Waterhouse Coopers, focusing particularly on the company's practice of not writing down the values of its oil and gas reserves in the context of the escalating global response to climate change.¹⁶⁴ These multiple investigations are ongoing.

Ashley Poon, *An Examination of New York's Martin Act as a Tool To Combat Climate Change*, 44 B.C. ENVTL. AFF. L. REV. 115, 131–32 (2017).

158. Press Release, N.Y. State Office of the Attorney Gen., *supra* note 157. Specifically, the investigation focused on Peabody's misrepresentation of future projects for coal markets under various regulatory and market scenarios used by the International Energy Agency in its energy forecasting. *Id.*

159. The investigation uncovered considerable evidence that Peabody had conducted internal investigations of potential business impacts of climate change and contracted consultants to carry out this analysis but claimed in their SEC filings that these impacts were impossible to predict. Press Release, N.Y. State Office of the Attorney Gen., *supra* note 157.

160. The Martin Act, New York General Business Law article 23-A, sections 352–353, is a 1921 New York statute that gives extraordinary powers and discretion to an attorney general fighting financial fraud. *See* Poon, *supra* note 157.

161. *See id.* at 132.

162. *See* Justin Gillis & Clifford Krauss, *ExxonMobil Investigated for Possible Climate Change Lies by New York Attorney General*, N.Y. TIMES (Nov. 5, 2015), <http://www.nytimes.com/2015/11/06/science/exxon-mobil-under-investigation-in-new-york-over-climate-statements.html> [<https://perma.cc/X7GA-R6P9>]; Ivan Penn, *California to Investigate Whether Exxon Mobil Lied About Climate-Change Risks*, L.A. TIMES (Jan. 20, 2016, 3:00 AM), <http://www.latimes.com/business/la-fi-exxon-global-warming-20160120-story.html> [<https://perma.cc/C8CJ-CX8H>].

163. For a fuller discussion of the New York investigation and corresponding actions in other states, *see* Poon, *supra* note 157.

164. Bradley Olson & Aruna Viswanatha, *SEC Probes Exxon Over Accounting for Climate Change*, WALL ST. J. (Sep. 20, 2016, 7:55 PM), <https://www.wsj.com/articles/sec-investigating-exxon-on-valuing-of-assets-accounting-practices-1474393593> [<https://perma.cc/A2YF-B67L>]; Christine Wang, *SEC Reportedly Investigating Exxon Mobil on Climate Change, Accounting Practices: Report*, CNBC (Sept. 20, 2016, 6:16 PM), <https://www.cnbc.com/2016/09/20/sec-investigating-exxon-mobil-on-climate-change-accounting-practices>

In the first private claim related to climate risk disclosure, a shareholder class action was commenced in November 2016 against Exxon on behalf of purchasers of Exxon stock during the class period (February–October 2016).¹⁶⁵ The complaint alleges that throughout this period, Exxon repeatedly highlighted the strength of its business model and its transparency and reporting integrity, particularly with regard to its oil and gas reserves and the value of those reserves.¹⁶⁶ The claimants argue that these public statements by the company were materially false and misleading because: they failed to disclose Exxon’s own internal reports concerning the nature and extent of climate change risks; given these risks, a material portion of Exxon’s reserves were stranded and should therefore be written down; and Exxon had used an inaccurate price on carbon to value certain of its future oil and gas prospects in order to keep the value of its reserves materially overstated.¹⁶⁷ They alleged that as a result of these misleading statements, Exxon stock traded at artificially inflated prices.¹⁶⁸ The claimants have alleged that they suffered a loss when the value of Exxon stocks fell substantially as a result of the above noted regulatory investigations into the company’s disclosure and accounting practices and subsequent announcements by Exxon that it might be forced to write down nearly 20% of its oil and gas assets.¹⁶⁹

These regulatory investigations and private claims have all targeted large, fossil fuel companies, often as part of a broader strategic litigation movement to support greenhouse gas emissions reduction and energy-transition campaigns. The parallels between the emerging litigation strategy being deployed against carbon majors and the litigation strategies used to tackle Big Tobacco have been increasingly noted:¹⁷⁰ coalitions of state regulators are working together to target corporations and deploying misleading and deceptive conduct avenues, which in turn may support other litigation streams.¹⁷¹ For example, the volumes of internal company information that have been made publicly available through the Exxon investigations are being used as the basis for other litigation, such as claims brought by Californian municipalities against carbon majors for loss and damages suffered as a result of climate change,¹⁷² as well as to undermine the company’s reputation and social license to operate.¹⁷³ These securities fraud claims are also being replicated in other comparable common law jurisdictions such as the United Kingdom¹⁷⁴ and

-report.html [https://perma.cc/77FH-LBFK].

165. Complaint, *Ramirez v. Exxon Mobil Corp.*, No. 3:16-cv-3111 (N.D. Tex. 2016), http://securities.stanford.edu/filings-documents/1059/EMC00_02/2016117_f01c_16CV03111.pdf [https://perma.cc/G3HU-EX64].

166. *Id.*, ¶¶ 3, 29–33.

167. *Id.*, ¶¶ 3(a)–(c), 34–46.

168. *Id.*, ¶¶ 4–7, 47–58.

169. *Id.*, ¶¶ 62–68.

170. *See, e.g.*, Ellison, *supra* note 139, at 29, 33, 35.

171. Poon, *supra* note 157, at 126.

172. *Supra* note 137.

173. Reputational risks are noted as a type of potentially material financial risk associated with climate change. *See* TCFD, *supra* note 133, at 24, tbl. 3b.

174. For example, ClientEarth, a leading environmental law NGO in the UK, submitted regulatory complaints to the UK Financial Reporting Council in 2016 alleging that two major oil and gas companies (SOCO International PLC and Cairn Energy PLC) failed to disclose

Australia.¹⁷⁵ While there have not yet been any formal outcomes in the form of court decisions and orders to crystallize their impact on corporate behavior, the significant intensification of litigation activity is an indication of growing pressure on companies to acknowledge and respond appropriately to risks associated with the energy transition.

C. Shareholder Proposals

Another legal avenue that has been increasingly used to influence company and investor decision-making to support energy divestment and reinvestment is bringing shareholder proposals to the general meeting of companies. Shareholder proposals are a formal, public avenue for shareholder activism,¹⁷⁶ which can take a range of forms, including more behind-the-scenes negotiation and appeals to management.¹⁷⁷ This form of shareholder activism has a long history in the United States,¹⁷⁸ with

climate-related risks to investors. The complaints argued that the annual reports of these companies did not provide a fair review of the company's business; a proper account of the main trends and factors likely to affect the future development, performance, and position of the company's business; nor a proper description of the principal risks and uncertainties facing the company, as required by governing legislation. *See* Companies Act 2006 § 414C(7)(a), § 414C(2)(b) & § 172 (UK). For further information, see CLIENTEARTH, INVESTOR BRIEFING: COMPLAINTS FILED AGAINST SOCO INTERNATIONAL PLC AND CAIRN ENERGY PLC (2016), <https://www.documents.clientearth.org/library/download-info/investor-briefing-complaints-filed-against-soco-international-plc-and-cairn-energy-plc/> [<https://perma.cc/623F-25JR>].

175. In August 2017, a shareholder of the Commonwealth Bank of Australia (one of the four main banks in Australia) lodged a claim in the Federal Court alleging that the bank had failed to disclose the risks associated with climate change that may impact on lending and investment activities, strategies, and prospects in its 2016 Annual Report. *See Abrahams v Commonwealth Bank of Austl.* [2017], FCA, VID 879/2017 (Austl.). As a consequence, the bank had allegedly failed to present a true and fair view of its position and prospects as required by governing law, *see* Corporations Act 2001 (Cth), ss 292(1)(b), 295, 297, 298(1), 298(1AA) (Austl.). *Id.* For a discussion of this case, see Anita Foerster & Jacqueline Peel, *Climate Change is a Financial Risk, According to a Lawsuit Against the CBA*, THE CONVERSATION (Aug. 15, 2017, 4:14 PM), <https://theconversation.com/climate-change-is-a-financial-risk-according-to-a-lawsuit-against-the-cba-82505> [<https://perma.cc/RKA5-KC6J>].

176. Shareholder activism is broadly defined to refer to actions taken by shareholders with the intention of influencing the policy and practices of a corporation. For a comprehensive account of the development of shareholder activism in the United States and a multidisciplinary literature review of empirical work in the field, see Maria Goranova & Lori Versteegen Ryan, *Shareholder Activism: A Multidisciplinary Review* 40 J. MGMT. 1230, 1232 (2014).

177. *Id.* at 1247–48. Other public forms of activism may include questions put to the general meeting, publicized letters, and media campaigns; whereas private forms of activism may include behind-the-scenes consultations and negotiations, letters, phone calls, meetings, and ongoing dialogue. *See also* Jeanne M. Logsdon & Harry J. Van Buren III, *Beyond the Proxy Vote: Dialogues Between Shareholders and Corporations*, 87 J. BUS. ETHICS 353 (2009).

178. Goranova and Ryan discuss the evolution of the shareholder activism landscape since 1942 when shareholders were first granted the right to submit shareholder resolutions, *supra* note 176, at 1233–34.

shareholders exercising their rights to put forward (usually) nonbinding resolutions as a strategy to engage with management and influence company policy and practice in a wide range of areas such as executive remuneration, labor rights and environmental responsibility.¹⁷⁹ Over time, the types of parties bringing (or sponsoring) such resolutions has expanded from predominantly individual shareholders, charities, religious organizations and environmental groups to also include large-scale socially responsible investor platforms with considerable shareholdings and potential influence.¹⁸⁰

Shareholder proposals on climate change began emerging over twenty years ago,¹⁸¹ and have come to represent a significant proportion of the total proposals brought.¹⁸² Over time, climate change-related shareholder proposals have become increasingly sophisticated. Early resolutions focused on disclosing greenhouse gas emissions and energy use and reporting on how climate change policies may affect the company. More recent proposals urge companies to develop new business strategies that accord with global temperature goals to mitigate dangerous climate change (as agreed in the Paris Climate Accord) and report on their implementation,

179. Shareholder activism tends to be viewed in two streams—(1) financial activism seeking to improve corporate governance and accountability and maximize shareholder value and (2) social activism which pursues various social, environmental, or political causes. In practice, there are often overlapping and complex drivers behind shareholder activism and climate change resolutions focusing on material financial risks are a good example of this. For a comprehensive account of the development of shareholder activism in the United States and a multidisciplinary literature review of empirical work in the field, see Goranova & Ryan, *supra* note 176, at 4, 12. For discussion of shareholder activism related to climate change, see Cynthia E. Clark & Elise Perrault Crawford, *Influencing Climate Change Policy*, 51 BUS. & SOC'Y 148, 152 (2012); J. Kevin Healy & Jeffrey M. Tapick, *Climate Change: It's Not Just a Policy Issue for Corporate Counsel – It's a Legal Problem*, 29 COLUM. J. ENV'T L. 89 (2004); Erin M. Reid & Michael W. Toffel, *Responding to Public and Private Politics: Corporate Disclosure of Climate Change Strategies*, 30 STRATEGIC MGMT. J. 1157, 1160 (2009).

180. Goranova & Ryan, *supra* note 176, 1233, 1244–45; see also Michael Macleod & Jacob Park, *Financial Activism and Global Climate Change: The Rise of Investor-Driven Governor Networks*, 11 GLOBAL ENV'T POL. 54 (2011).

181. For example, the first climate change resolution was put to Exxon Mobil in 1997. Dashka Slater, *Resolved: Public Corporations Shall Take us Seriously*, N.Y. TIMES (Aug. 12, 2009), http://www.nytimes.com/2007/08/12/magazine/12exxon-t.html?_r=0 [https://perma.cc/HMT7-WQ5A].

182. For example, the Ceres's Investor Network on Climate Risk (which includes some of the nation's largest public pension funds, foundations and religious, labor and socially responsible investors and manages more than \$23 trillion in collective assets) tracks shareholder resolutions filed by network members on sustainability-related issues including climate change. According to this data, 363 of a total of 781 resolutions filed by the Ceres's Investor Network on Climate Risk on sustainability related issues in 2016 focused on climate change; 44 of these also related to carbon asset risk; and 200 also related to GHG emissions (with some overlap between these categories). See *Climate and Sustainability Shareholder Resolution Database*, CERES (MAR. 7, 2017), <https://www.ceres.org/resources/tools/climate-and-sustainability-shareholder-resolutions-database> [https://perma.cc/2YHK-6PZX]. More generally, Rehbein, Waddock, and Graves document the general increase over time in social issue proposals. See Kathleen Rehbein, Sandra Waddock & Samuel B. Graves, *Understanding Shareholder Activism: Which Corporations Are Targeted?* 43 BUS. & SOC'Y 239 (2004).

or to put a climate expert on the board.¹⁸³ Recent resolutions have also requested companies to disclose direct and indirect lobbying activities and expenditures to allow shareholders to assess whether the company's lobbying is consistent with its expressed goals and in the best interests of stockholders, often drawing particular attention to memberships in, or payments to, trade associations which may engage in lobbying activity that undermines the international climate regime and directly contradicts the stated company position on climate change.¹⁸⁴

Shareholder proposals are a form of engagement reliant on continuing shareholding in a company. While this tool may support internal asset divestment decisions by companies, it should be distinguished from decisions by shareholders to divest outright of stocks in fossil fuel companies (capital divestment) and as such relinquish their ownership rights and restrict opportunities for continuing engagement. As noted earlier, there is an ongoing debate around the value of capital divestment versus engagement as a strategy to drive private sector uptake of clean energy practices, particularly in light of the concern that capital divestment may have limited or unintended economic impacts on the targeted firms and sectors.¹⁸⁵ For example, capital divestment will rarely deprive companies of capital; instead it merely shifts asset owners away from shareholders who are concerned about climate

183. For example, in the 2016 general meeting of Chevron Corporation, a resolution asking for an annual report each year on how climate-change policies will affect the company received 41% of the vote. A similar resolution brought to the meeting at Exxon Mobil received 38%. The company's shareholders rejected resolutions to put a climate expert on the board and to support the goal of the 2015 Paris Agreement to limit global warming to two degrees Celsius above pre-industrial levels. See David Koenig, *Exxon, Chevron Shareholders Reject Climate Resolutions*, CLIMATE CHANGE DISPATCH (May 26, 2016), <https://climatechangedispatch.com/exxon-chevron-shareholders-reject-climate-resolutions/> [<https://perma.cc/7EJC-WFFW>]. In 2017, climate change resolutions brought to three major fossil fuel companies—Occidental Petroleum, PPL, and Exxon Mobil—received majority votes (66%, 57%, and 62% respectively). These proposals requested the companies to issue a report providing a “2 degree scenario analysis” to

assess the impact on the company's asset portfolio of long-term climate change, explaining (as stated in the Occidental proxy) “how capital planning and business strategies incorporate analyses of the short- and long-term financial risks of a lower carbon economy,” including specifically, “the impacts of multiple, fluctuating demand and price scenarios on the company's existing reserves and resource portfolio.”

Cydney Posner, *Are Shareholder Proposals on Climate Change Becoming a Thing?*, HARV. L. SCH. F. ON CORP. GOVERNANCE & FIN. REG. (June 21, 2017), <https://corpgov.law.harvard.edu/2017/06/21/are-shareholder-proposals-on-climate-change-becoming-a-thing/> [<https://perma.cc/7ZBB-H3FD>] (discussing these three resolutions).

184. See, for example, a proposal filed by a member of the Ceres' Investor Network on Climate Risk to the general meeting of BlackRock Inc. concerning BlackRock's membership and payments to various trade associations that undertake lobbying to undermine the Paris Climate Accord. The filers claim that the lack of trade association lobbying disclosure by BlackRock presents significant reputational risk because BlackRock itself believes climate change risk is an investment issue. https://engagements.ceres.org/ceres_engagementdetailpage?recID=a011H00000CFIqOQAX.

185. Richardson, *supra* note 77.

change to those who are not concerned.¹⁸⁶ As such, divestment strategies may have greater moral rather than economic value and play an important role in awareness raising and challenging the social license of polluting industries to operate rather than directly undermining the financial position of targeted firms. In this light, there are strong arguments in favor of adopting a strategy of engagement (via shareholder proposals and other tools) over capital divestment, particularly in relation to firms that are open to engaging with shareholders around the development of energy transition strategies in order to retain their investment.¹⁸⁷ Further, as global investment managers BlackRock argue in a 2016 statement on adapting portfolios to climate change, large integrated companies will often have significant technical and resource capacity that could be deployed to develop and commercialize clean energy technology.¹⁸⁸ For this reason, they favor engaging with these types of companies to influence company direction in this way rather than outright capital divestment.¹⁸⁹

The legal basis for shareholder proposals in the United States is found in federal securities regulations, which grant shareholders who own a relatively small amount of a company's securities¹⁹⁰ a right to put forward a nonbinding proposal as part of the proxy materials to be voted on at an annual or special meeting of shareholders.¹⁹¹

186. Ayling & Gunningham, *supra* note 82.

187. ERISA fiduciaries considering shareholder engagement over social policy issues such as climate change face legal constraints similar to those concerning their investment decisions. *See supra* notes 114–123 and accompanying text. Their focus must always remain on economic returns. A series of interpretive bulletins concerning proxy voting resembles the bulletins on investment decisions. 29 C.F.R. § 2509.94-2 (2018); 29 C.F.R. § 2509.08-2 (2018); 29 C.F.R. § 2509.16-1 (2018); Field Assistance Bulletin No. 2018-01, *supra* note 119. The core principle remains that ERISA fiduciaries must focus on economic returns. They can incur modest costs in proxy voting and shareholder engagement to the extent that such voting and engagement can plausibly be seen to increase the value of their investments. The exact rhetoric of the guidance again varies, with bulletins issued during Democratic administrations rather more encouraging of engagement around social policy issues while bulletins issued during Republican administrations are less encouraging.

188. BLACKROCK INVESTMENT INSTITUTE, ADAPTING PORTFOLIOS TO CLIMATE CHANGE: IMPLICATIONS AND STRATEGIES FOR ALL INVESTORS (2016), <https://www.blackrock.com/investing/literature/whitepaper/bii-climate-change-2016-us.pdf> [<https://perma.cc/3RA2-PPN8>].

189. *Id.*

190. Rule 14a-8 under the Securities Exchange Act of 1934 provides that to be eligible to submit a proposal, a shareholder must own at least \$2,000 in market value, or 1%, of a company's outstanding stock for at least one year. 17 C.F.R. § 240.14a-8 (2018). They must continue to hold those shares through the meeting date and securities held must be entitled to be voted on the proposal at the meeting. *Id.* Changes to these parameters which would make it more difficult for activist shareholders to qualify to submit a proposal were outlined in the Financial Choice Act of 2017 which was passed by the House of Representatives on June 8, 2017, and is now before the U.S. Senate. *See H.R.10 – Financial CHOICE Act of 2017*, CONGRESS.GOV, <https://www.congress.gov/bill/115th-congress/house-bill/10> [<https://perma.cc/W2LF-RBTY>]. These changes would remove the \$2,000 limit and extend the minimum period of holding of 1% of capital from 1 year to 3 years as well as requiring that proposals be submitted directly by a shareholder (and not a proxy, representative, or agent). *Id.*

191. SEC Staff Legal Bulletin No. 14H (Oct. 22, 2015), <https://www.sec.gov/interps/legal/cfs1b14h.htm> [<https://perma.cc/TR8Y-JL7S>], provides further information for

A company will be required to include the proposal in the materials unless the shareholder fails to comply with procedural requirements or the proposal falls within one of the bases for exclusion provided in the rule.¹⁹² Grounds for exclusion are present where, *inter alia*, the subject matter of the proposal is not a proper subject for shareholder action under state law,¹⁹³ the company would lack the power to implement the proposal,¹⁹⁴ the proposal directly contravenes another proposal put forward by the company,¹⁹⁵ or the proposal relates to a matter of the company's ordinary business operations.¹⁹⁶ If a company decides to exclude a shareholder proposal from the proxy materials, it must submit a no-action request to the SEC explaining the reasons for this decision.¹⁹⁷ The SEC must respond by either supporting or rejecting the company's view in a no-action response.¹⁹⁸

For shareholders seeking to file proposals on environmental and climate change matters, the "ordinary business" exclusion has, in the past, been commonly raised by companies seeking to exclude a proposal through arguing that these resolutions concern matters that are properly the domain of company management, namely internal corporate assessments of general economic risks and policies.¹⁹⁹ The SEC advises that the rationale behind this exclusion is "to confine the resolution of ordinary business problems to management and the board of directors, since it is impracticable for shareholders to decide how to solve such problems at an annual shareholders meeting."²⁰⁰ This is intended to exclude proposals that address matters which are thought to be fundamental to management's ability to run a company (e.g. workforce management, decisions on production quality and quantity) or proposals seeking to "micro-manage" the company by seeking excessive detail or imposing

companies and shareholders on Rule 14a-8 under the Securities Exchange Act of 1934.

192. *Id.* at 2-3.

193. Rule 14a-8(i)(1) provides that a proposal may be excluded if the proposal is not a proper subject for action by shareholders under the laws of the jurisdiction of the company's organization. State laws typically provide for all corporate powers to be exercised by or under the authority of the company board. This serves to potentially exclude proposals on matters that fall within the broad power of management. 17 C.F.R. § 240.14a-8(i)(1) (2018).

194. Rule 14a-8(i)(6) provides that a proposal may be excluded if the company would lack the power or authority to implement the proposal. 17 C.F.R. § 240.14a-8(i)(6) (2018).

195. Rule 14a-8(i)(9) provides that a proposal may be excluded if the proposal directly conflicts with one of the company's own proposals to be submitted to shareholders at the same meeting. 17 C.F.R. § 240.14a-8(i)(9) (2018).

196. 17 C.F.R. § 240.14a-8(i)(7) (2018).

197. SEC Staff Legal Bulletin, *supra* note 191, at 4.

198. *Id.* at 8. The SEC states that no-action responses only reflect SEC's informal views regarding the application of rule 14a-8. This is not a "ruling" or "decision" on proposals that companies indicate they intend to exclude, and any SEC determinations do not and cannot adjudicate the merits of a company's position with respect to a proposal. As such, a no-action response in no way restricts shareholder rights to challenge a decision to exclude a proposal.

199. Matthew P. Allen, Eric M. Jamison & Mark J. Bennet, *SEC Opens the Door for Climate Change-Related Shareholder Proposals and Disclosure Requirements, with Potential New Liabilities for Public Companies*, 42 SEC. REG. & L. REP. 1, 2 (2010).

200. Amendments to Rules of Shareholder Proposals Release No. 34-40018, 17 C.F.R. 240 (May 21, 1998) <https://www.sec.gov/rules/final/34-40018.htm> [<https://perma.cc/E3JT-4XW6>].

unrealistic timeframes or methods for complex tasks.²⁰¹ However, an important exception applies for proposals focusing on a significant policy issue because the proposals would “transcend the day-to-day business matters of a company and raise policy issues so significant that it would be appropriate for a shareholder vote.”²⁰² As Matthew Allen, Eric Jamison, and Mark Bennet outlined in 2010, with the increase in greenhouse gas regulation and policy implications, climate change litigation trends and the SEC’s specific guidance on reporting climate-change-related business risks (discussed earlier), it became considerably more difficult to exclude resolutions on this basis as climate change was increasingly perceived as such a “significant policy issue” likely to pose material risks to a range of businesses.²⁰³ However, while companies may not be able formally to exclude a resolution on this basis, it is important to note that these are nonbinding or advisory resolutions. As such, it remains open to company management to oppose the resolution in the meeting and counter any shareholder request with information in the proxy materials, for example, outlining the company’s views and credentials on climate change.²⁰⁴

There has been some empirical research tracking the outcomes of shareholder resolutions in terms of changed corporate policy and practice,²⁰⁵ however, to our knowledge, there have been no comprehensive studies that track the impact of climate-change-related resolutions specifically, especially over longer time frames. Drawing on the somewhat equivocal and context-specific evidence that has been collected on the outcomes of socially-motivated shareholder activism to date, a number of more general observations are made. First, most social and environmental issue proposals do not gain a majority vote and are lobbied against by Boards of Directors and Executive Management.²⁰⁶ Nonetheless, such resolutions may still have both direct effects on the company itself and spillover effects on other companies in the same industry. These effects are especially likely in circumstances where there is also public political pressure (e.g. threat of regulation) on the issue in question²⁰⁷ and activists are targeting large and highly visible companies.²⁰⁸ Second, many shareholder proposals are negotiated and withdrawn and therefore do not actually appear on a proxy statement, suggesting that the appearance of an actual proposal may mean that management was not receptive to the activist’s agenda and is unlikely to be supportive of proposed actions.²⁰⁹

201. *Id.*

202. *Id.*; see also SEC Staff Legal Bulletin No. 14H, *supra* note 191; SEC Staff Legal Bulletin No. 14E (Oct. 27, 2009), <https://www.sec.gov/interps/legal/cfslb14e.htm> [<https://perma.cc/2RUZ-JYW2>].

203. *Supra* note 199, at 3.

204. *Id.*

205. See the outline of this body of research provided by Goranova & Ryan, *supra* note 176 at 1250–59.

206. Reid & Toffel, *supra* note 179, at 1160.

207. *Id.* at 1171.

208. Goranova & Ryan, *supra* note 176, at 1243; Rehbein et al., *supra* note 182.

209. Goranova & Ryan, *supra* note 176 at 1252 (quoting Shamsud D. Chowdhury & Eric Zengxiang Wang, *Institutional Activism Types and CEO Compensation: A Time-Series Analysis of Large Canadian Corporations*, 35 J. MGMT. 5 (2009)).

Our review of climate change resolutions²¹⁰ brought in the United States since 2011 under the banner of the Ceres' Investor Network on Climate Risk²¹¹ indicates that a significant and increasing number of these resolutions are proceeding to be considered at annual shareholders' meetings and receiving relatively high voting rates.²¹² Major investment managers and asset owners are also playing an increasingly influential role via their voting practices, with significant players, such as BlackRock, openly stating their intention to vote in favor of proposals that support transparent disclosure and management of climate risks.²¹³ This trend is well illustrated by the majority votes received for climate change resolutions at three major fossil fuel companies (Occidental Petroleum, PPL, and ExxonMobil) in 2017 and the key role that large asset owners played in achieving these votes.²¹⁴ Further, the Ceres data highlights that a significant proportion of climate-related proposals

210. This includes resolutions in the following categories (as identified by Ceres): climate change, carbon asset risk, coal, energy efficiency (buildings, products, and utilities), greenhouse gas emissions, methane emissions, and renewables.

211. Ceres is a nonprofit organization which seeks to mobilize a powerful network of investors, companies, and public interest groups to accelerate and expand the adoption of sustainable business practices and solutions to build a healthy global economy. In 2003, Ceres launched the Investor Network on Climate Risk (INCR) which now boasts over 161 institutional investor members managing more than \$25.2 trillion in collective assets. *See* Ceres Investor Network, CERES, <https://www.ceres.org/networks/ceres-investor-network> [<https://perma.cc/LE33-9FCB>].

212. This observation is based on data available in the Ceres Climate and Sustainability Shareholder Resolutions Database which records all resolutions filed by network members since 2011. This searchable database indicates whether resolutions were considered by the general meeting and if so, the voting rates, or conversely whether they were omitted or withdrawn, including whether they were withdrawn with a commitment made by management. *See* *Shareholder Resolutions*, CERES, https://tools.ceres.org/resources/tools/resolutions/@@resolutions_s3_view [<https://perma.cc/9RPQ-A4A2>].

213. In March 2017, BlackRock released a statement on their engagement strategy on climate risk, which stated:

Consistent with our long-term value focus and “engagement first” process, where shareholder proposals on climate risk clearly address a gap in investment-decision and stewardship relevant disclosure, that we believe will lead to material economic disadvantage to the company and its shareholders if not addressed, and management’s response to our prior engagement has been inadequate, we will consider voting in favor of proposals that would address our concern. Ultimately the board is responsible for protecting the long-term economic interests of shareholders and we may vote against the re-election of certain directors where we believe they have not fulfilled that duty, particularly in markets where shareholder proposals are not common.

BLACKROCK, HOW BLACKROCK INVESTMENT STEWARDSHIP ENGAGES ON CLIMATE CHANGE 2 (2017), <https://www.blackrock.com/corporate/en-us/literature/market-commentary/how-blackrock-investment-stewardship-engages-on-climate-risk-march2017.pdf> [<https://perma.cc/VV7M-5U39>].

214. *See* Posner, *supra* note 183. Posner suggested these successful resolutions may mark the beginning of a new trend with “companies most subject to climate change risk are . . . likely to be seeing an onslaught of similar proposals in the future” and large asset owners increasingly willing to push for improved action on climate risks. *Id.*

are being withdrawn by shareholders who are satisfied that the target company has agreed to respond to the proposal.²¹⁵ These figures, particularly the significant rate of withdrawal on the basis of ongoing engagement and negotiations, suggest that climate-related proposals together with associated engagement may be having some impact on company decision-making, at least in helping to drive more transparency and better quality disclosure of climate-change-related business risks.²¹⁶ Moreover, like the disclosure investigations discussed in the previous Section, shareholder proposals on climate change are also being deployed strategically in numerous comparable jurisdictions around the world, adding to the potential spill-over effects on companies in similar sectors and industries.²¹⁷ At the very least, we can say that this type of shareholder activism shows no sign of decreasing and is contributing to the growing pressure on companies to pursue clean energy reinvestment pathways.

D. Fiduciary Duties

Another legal strategy advocated by some activists is to bring fiduciary duty lawsuits against companies that face significant exposure to risk from climate change. The argument is that the directors and officers of such companies should manage such risks by switching from fossil fuels to other energy investments. This strategy has synergies with the above described approach of considering fiduciary duties of investment managers, but instead focuses on duties of managers of

215. See *supra* note 212.

216. Of interest here is a recent statement by BlackRock regarding their ongoing engagement with Chevron Corporation on issues of climate risk. BLACKROCK, ENGAGEMENT LEADS TO DISCLOSURE IMPROVEMENT AT CHEVRON (2017), <https://www.blackrock.com/corporate/en-us/literature/publication/blk-vote-bulletin-chevron-may-2017.pdf> [<https://perma.cc/L949-QNKU>]. BlackRock outlines comprehensive engagement activities which led them to vote with management against shareholder proposals seeking particular climate risk reporting initiatives in 2016 on the basis that they were confident that the company was appropriately considering climate risk and was committed to ongoing improvement of disclosures. They also discuss and commend the withdrawal of similar shareholder proposals by activist shareholders who were equally satisfied that Chevron was making sufficient progress on climate risk disclosure. *Id.*

217. For example, the Australasian Centre for Corporate Responsibility lodged a number of special shareholder resolutions with the largest Australian banks in the 2015 AGM season seeking amendments to the various company constitutions. One amendment stated

[t]hat, each year at about the time of the release of the Annual Report, at reasonable cost and omitting any proprietary information, the Directors report to shareholders their assessment of the quantum of greenhouse gas emissions we are responsible for financing calculated, for example, in accordance with Greenhouse Gas (GHG) Protocol guidance.

Climate – Big Banks, AUSTRALASIAN CENTRE FOR CORPORATE RESPONSIBILITY, <https://accr.org.au/climate/big-banks/> [<https://perma.cc/AT9B-BGT8>]. In the United Kingdom, Shareaction, ClientEarth, and the Aiming for “A” Coalition have brought a number of shareholder resolutions to the annual general meetings of large fossil fuel companies seeking improved disclosure of climate change risk. Notably, these resolutions received very high voting percentages. See, e.g., *Shell Follows BP with Climate Change Resolution*, CLIENTEARTH (May 19, 2015), <https://www.clientearth.org/shell-follows-bp-with-climate-change-resolution/> [<https://perma.cc/N69P-EP4M>].

operating companies. This Section analyzes the extent to which company directors' duties allow or require them to consider goals other than the financial returns of their shareholders. It also considers the viability of fiduciary duty lawsuits against operating company officers and directors.²¹⁸

The Section considers both statutory and case law to explore the contours of fiduciary duty in this context. The basic structure of fiduciary duty law applicable to companies is similar to the above-described law applicable to investors. The directors and officers of a corporation are subject to both the duty of loyalty and the duty of care. These require them faithfully and with an adequate degree of care to pursue the best interests of the corporation.²¹⁹

Questions as to how the law conceives the best interests of the corporation have been the subject of a long-running debate in corporate law.²²⁰ The dominant position

218. Our focus is on the scope of fiduciary duties in U.S., and particularly Delaware, law. However, it is interesting here to note the emergence of legal opinions from senior barristers in comparable common law jurisdictions such as the United Kingdom and Australia, suggesting that the risk of litigation against a company director (or indeed company auditors or other professional advisers) for a failure to adequately disclose and manage the financial risks posed by climate change is increasingly likely. For example, see the legal opinion issued by leading Australian barristers Noel Hutley SC and Sebastian Hartford-Davis in late 2016 outlining potential liability implications for company directors and others who fail to consider and disclose foreseeable climate risks and cautioning that such litigation is “only a matter of time.” NOEL HUTLEY SC & SEBASTIAN HARTFORD-DAVIS, CLIMATE CHANGE AND DIRECTOR'S DUTIES: MEMORANDUM OF OPINION (2016), <https://cpd.org.au/wp-content/uploads/2016/10/Legal-Opinion-on-Climate-Change-and-Directors-Duties.pdf> [<https://perma.cc/MW8W-XPYQ>]. For further discussion of litigation risk associated with climate change including for breach of fiduciary duties, see MINTER ELLISON & 2 DEGREES INVESTING INITIATIVE, *supra* note 139. For an opinion on the legal duties and litigation risks faced by pension fund trustees in Australia, see NOEL HUTLEY & JAMES MACK, MARKET FORCES: SUPERANNUATION FUND TRUSTEE DUTIES AND CLIMATE CHANGE RISK: MEMORANDUM OF OPINION (2017). For the U.K. context, see, for example, KEITH BRYANT & JAMES RICKARDS, THE LEGAL DUTIES OF PENSION FUND TRUSTEES IN RELATION TO CLIMATE CHANGE: ABRIDGED JOINT OPINION (2016), <https://www.documents.clientearth.org/wp-content/uploads/library/2016-12-02-the-legal-duties-of-pension-fund-trustees-qc-opinion-ext-en.pdf> [<https://perma.cc/JRX8-MCZ5>]; CLIENTEARTH, RISKY BUSINESS: CLIMATE CHANGE AND PROFESSIONAL LIABILITY RISKS FOR AUDITORS (2017), <https://www.documents.clientearth.org/wp-content/uploads/library/2017-12-13-risky-business-climate-change-and-professional-liability-risks-for-auditors-ce-en.pdf> [<https://perma.cc/KHE5-DQZ6>]. As we shall see, the chances of success of such suits in the United States are extremely low. Given that traditionally corporate law duty suits have been more frequent and successful in the United States than in the United Kingdom, and other similar countries, it would surprise us if this legal theory proved more successful outside the United States, but time will tell. On the greater frequency of corporate law duty suits in the United States., see John Armour, Bernard Black, Brian Cheffins & Richard Nolan, *Private Enforcement of Corporate Law: An Empirical Comparison of the United States, and the United Kingdom*, 6 J. EMPIRICAL LEG. STUD. 687 (2009).

219. Claire A. Hill & Brett H. McDonnell, *Fiduciary Duties: The Emerging Jurisprudence*, in RESEARCH HANDBOOK ON THE ECONOMICS OF CORPORATE LAW 133, 134–35 (Claire A. Hill & Brett H. McDonnell eds. 2012).

220. The debate goes back at least to the nineteen thirties. See A.A. Berle, Jr., *Corporate Powers As Powers in Trust*, 44 HARV. L. REV. 1049 (1931); E. Merrick Dodd, Jr., *For Whom*

is that the sole appropriate goal of a business corporation is to maximize the financial return to its shareholders (shareholders approach).²²¹ A persistent competing position holds that the corporation should consider the interests not just of shareholders, but also of a variety of other stakeholders involved in a corporation, including its creditors, employees, customers, suppliers, and the local community and environment (stakeholders approach).²²²

There is much variation across countries regarding how the law treats these competing theories of corporate purpose. The U.S. case law and statutory law does not fully resolve the issue. Statutes on corporate purpose give little basis for choosing between the shareholder and the stakeholder approaches.²²³ Prior to the 1980s, commentators relied heavily on one case for the assertion that the shareholder approach is correct: *Dodge v. Ford*.²²⁴

However, two developments pointing in opposite directions have shifted this discourse. First, several cases in Delaware, the leading state of incorporation for publicly traded U.S. corporations, have included a clearer statement of the shareholder value maximization position. The first of these cases held that when control of a corporation is being sold, the board has a duty to focus solely on getting the best price for its shareholders that it can.²²⁵ This case thus asserted the shareholder value norm, but only in a quite limited factual setting. A more recent case asserted that norm in a different factual setting, namely regarding the adoption of defenses against hostile takeovers.²²⁶ And several recent articles by the Chief Justice of the Delaware Supreme Court assert that the shareholder value maximization norm applies in all contexts.²²⁷

Second, pointing in the opposite direction, towards a stakeholder approach, is a series of statutes adopted in states other than Delaware. These corporate constituency statutes posit that directors and officers may take into account the interests of a

Are Corporate Managers Trustees?, 45 HARV. L. REV. 1145 (1932).

221. See FRANK H. EASTERBROOK & DANIEL R. FISCHER, *THE ECONOMIC STRUCTURE OF CORPORATE LAW* 35–39 (1991); Stephen M. Bainbridge, *Director Primacy: The Means and Ends of Corporate Governance*, 97 NW. U. L. REV. 547, 574–92 (2002); Berle, *supra* note 220; Milton Friedman, *The Social Responsibility of Business Is To Increase Its Profit*, N.Y. TIMES, Sept. 13, 1970, at 32.

222. Margaret M. Blair & Lynn A. Stout, *A Team Production Theory of Corporate Law*, 85 VA. L. REV. 247 (1999); Dodd, *supra* note 220; Lyman Johnson & David Millon, *Corporate Law After Hobby Lobby*, 70 BUS. L. 1 (2014).

223. DEL. CODE ANN. tit. 8, § 101(b) (2011) (“A corporation may be incorporated or organized under this chapter to conduct or promote any lawful business or purposes”); MODEL BUSINESS CORPORATION ACT § 3.01 (2016) (“Every corporation incorporated under this Act has the purpose of engaging in any lawful business unless a more limited purpose is set forth in the articles of incorporation.”).

224. *Dodge v. Ford Motor Co.*, 170 N.W. 668 (Mich. 1919).

225. *Revlon, Inc. v. MacAndrews & Forbes Holdings, Inc.*, 506 A.2d 173, 182 (Del. 1986).

226. See *eBay Domestic Holdings, Inc. v. Newmark*, 16 A.3d 1 (Del. Ch. 2010).

227. See Leo E. Strine, Jr., *Our Continuing Struggle with the Idea that For-Profit Corporations Seek Profit*, 47 WAKE FOREST L. REV. 135 (2012); Leo E. Strine, Jr., *The Dangers of Denial: The Need for a Clear-Eyed Understanding of the Power and Accountability Structure Established by the Delaware General Corporation Law*, 50 WAKE FOREST L. REV. 761 (2015).

variety of specified groups, including those listed above in describing the stakeholder approach.²²⁸ There is some debate over the appropriate scope of these statutes. Some claim they should be interpreted only as allowing managers to consider the interests of other constituents to the extent that doing so furthers the interest of shareholders.²²⁹ However, others argue that this limiting interpretation seems to bely the importance that was attached to these constituency statutes when they were adopted.²³⁰ Slightly over half of all states have a constituency statute,²³¹ making the interpretation of these statutes critical to emerging efforts at establishing fiduciary duties regarding climate change for managers of operating companies.

Another barrier to these suits is the business judgment rule. For cases not involving a conflict of interest, courts are generally unwilling to second guess the business decisions of corporate directors. To succeed in a case not involving a conflict of interest, one must show that the directors violated a law, did not act in good faith, or that the decision in question was so irrational that it amounted to giving away corporate assets.²³²

If the challenge is not brought to a specific corporate decision, but rather to the general corporate policy and risk profile, the prospects of success are similarly bleak. Delaware precedent does allow suits claiming that a corporation's risk management has inadequately guarded against the risk of failing to comply with the law.²³³ However, the chances of succeeding in such a suit are quite slim, and Delaware courts have been reluctant to extend this risk management line of cases beyond the risk of legal noncompliance to more general financial risk.²³⁴

Some climate change and other environmental and social activists are highly critical of the shareholder value maximization norm and see it as a leading force blocking corporate action to speed energy transition.²³⁵ However, the same business judgment rule that blocks shareholders from forcing the corporate board to be more

228. See *supra* text accompanying note 222.

229. Committee on Corporate Laws, *Other Constituencies Statutes: Potential for Confusion*, 45 BUS. LAW. 2253, 2269 (1990).

230. *Id.* at 2266. The statutes were adopted to give corporate boards more leeway to block hostile takeovers. In Minnesota, for example, the legislature was called into special session to adopt a constituency statute in response to a takeover threat posed to a leading in-state corporation, Dayton's. See *Minnesota Passes Law to Help Thwart Takeover of Dayton Hudson*, L.A. TIMES (June 26, 1987), http://articles.latimes.com/1987-06-26/business/fi-6717_1_dayton-hudson [<https://perma.cc/UF4E-CX4Q>].

231. Jonathan D. Springer, *Corporate Constituency Statutes: Hollow Hopes and False Fears*, 1999 ANN. SURV. AM. L. 85, 95 (1999).

232. See *Aronson v. Lewis*, 473 A.2d 805 (Del. 1984). Another possibility is to show that the board was grossly negligent in informing itself before making the decision. However, corporations can adopt provisions preventing director financial liability in such circumstances, and most do so. Del. Code Ann. tit. 8, § 102(b)(7) (2011).

233. See *In re Caremark Int'l, Inc. Derivative Litig.*, 698 A.2d 959 (Del. Ch. 1996).

234. For a more extended analysis reaching a similar conclusion as to the long odds of success for duty suits in the United States., see Risley, *supra* note 9.

235. See, e.g., LINN ANKER-SØRENSEN, BLANAID CLARKE, ANDREW JOHNSTON, CAROL LIAO, JUKKA MÄHÖNEN, DAVID MILLON, BENJAMIN J. RICHARDSON, BEATE SJÄFJELL & CHARLOTTE VILLIERS, *COMPANY LAW AND SUSTAINABILITY: LEGAL BARRIERS AND OPPORTUNITIES* (Beate Sjäffell & Benjamin J. Richardson eds., 2015) (ebook).

proactive also allows those boards to be more proactive if they wish to. As long as the board makes any sort of plausible link between a more sustainable corporate policy and long-run returns to shareholders, courts are quite likely to defer to that business judgment.²³⁶

Thus, the law of corporate purpose and duty is largely agnostic on climate change, allowing corporate boards and officers significant flexibility in their approach to the transition to less carbon-intensive energy. It may well be that various features of business corporations do create pressure to focus on shareholder value and on relatively short-term profits, although that is disputed.²³⁷ If so, those features are largely structural, including the fact that shareholders are the sole constituency that elects boards, as well as the rise of activist shareholder investors²³⁸ and executive compensation tied to share value.²³⁹ Fiduciary duty law has little compelling legal effect, although it may play a significant role in helping set or reinforce norms of good corporate behavior.²⁴⁰

Finally, not all corporations are structured around maximizing shareholder returns. As explored in the following Part, for a small but growing number of corporations, the law does require taking into account various environmental and social interests. That is a leading legal characteristic of a new type of entity called the benefit corporation.²⁴¹ Benefit corporations are mostly governed by the law of (for-profit) business corporations, but they are governed by different rules on three points: (1) their purpose must be to pursue general public benefit as well as shareholder value;²⁴² (2) their directors and officers have a fiduciary duty to consider the effect of their decisions on a variety of specified stakeholder groups;²⁴³ and (3) they must regularly report on what they have done to promote the general public benefit.²⁴⁴ Given these rules, in theory, a shareholder suit against a corporation on climate change grounds could have more basis.²⁴⁵ However, there are still very few benefit corporations in existence, just a few thousand, and most of them are very

236. A classic example is *Shlensky v. Wrigley*, 237 N.E.2d 776 (Ill. App. Ct. 1968).

237. Claire A. Hill & Brett H. McDonnell, *Short- and Long-Term Investors (and Other Stakeholders Too): Must (and Do) Their Interests Conflict?*, in RESEARCH HANDBOOK ON MERGERS AND ACQUISITIONS 396 (Claire A. Hill & Steven Davidoff Solomon eds., 2016).

238. *Id.*

239. LUCIAN BEBCHUK & JESSE FRIED, PAY WITHOUT PERFORMANCE: THE UNFULFILLED PROMISE OF EXECUTIVE COMPENSATION (2004).

240. Claire Hill & Brett McDonnell, *Executive Compensation and the Optimal Penumbra of Delaware Corporation Law*, 4 VA. L. & BUS. REV. 333, 334 (2009); Lyman Johnson, *Counter-Narrative in Corporate Law: Saints and Sinners, Apostles and Epistles*, 2009 MICH. ST. L. REV. 847, 849; Edward B. Rock, *Saints and Sinners: How Does Delaware Corporate Law Work?*, 44 UCLA L. REV. 1009, 1012 (1997).

241. See MODEL BENEFIT CORP. LEGISLATION (2016), http://benefitcorp.net/sites/default/files/Model%20Benefit%20Corp%20Legislation_4_16.pdf [<https://perma.cc/F9PJ-3RRJ>].

242. *Id.* § 201.

243. *Id.* §§ 301, 303.

244. *Id.* § 401.

245. Though there are many obstacles to such a suit even in a benefit corporation, and such suits are actually unlikely to succeed in most circumstances. See Brett H. McDonnell, *Committing to Doing Good and Doing Well: Fiduciary Duty in Benefit Corporations*, 20 FORDHAM J. CORP. & FIN. L. 19, 63 (2014).

small. These companies generally do not have a significant greenhouse gas emissions profile that would lead to lawsuits against them but may instead be of value in the second pathway of encouraging reinvestment.²⁴⁶

III. EMERGING LEGAL OPPORTUNITIES FOR ENERGY ENTREPRENEURS

Part II focused upon several kinds of legal and political strategies. The divestment movement encourages various institutional investors to take their investment out of companies that are too heavily involved in fossil fuels. Shareholder activism through lobbying, proposals, and duty or disclosure suits attempts to persuade large companies to move their internal investments from fossil fuels to renewable energy. In different ways, these strategies attempt to change the behavior of, or take resources from, existing large energy-related companies that are heavily exposed to fossil fuels.

Although those large existing companies can and do invest in innovations in renewable energy,²⁴⁷ they are not the only drivers of innovation and refocused investment in energy resources. Companies with heavy, longstanding investments in fossil fuels will often find it hard to break entirely with their old ways of doing things. Disruption will often entail large financial losses on their old investments and also will often disrupt the careers of employees whose expertise lie with fossil fuel technologies. Thus, much investment in renewable energy and clean energy innovation will likely come from newer companies.²⁴⁸ Also, companies that have a legal purpose of advancing public goals and sustainability may be more likely to support these investments.²⁴⁹

Recall the above quote from Bill Gates:²⁵⁰ investors should be looking not just to remove money from companies that are hurting the environment, but also to give money to companies that are committed to leading the way to a future based on sustainable forms of energy. This second pathway is critical to achieving the goals of energy transition. This Part explores two recent legal developments that help encourage such investment. The first reduces securities law costs for some forms of investment in smaller, newer businesses.²⁵¹ The second creates new legal forms for social enterprises that have dual goals of generating profits while also pursuing social goals.²⁵²

A. Start-Up and Project Investment

Some investment in technology surrounding energy transition is occurring within already existing large corporations, particularly in the energy field.²⁵³ However, other investment occurs through funding smaller new start-up companies. A significant amount of funding of new technology and research in emerging areas such as wind,

246. See *supra* text accompanying note 222.

247. For patterns of energy investment, see *supra* note 6 and accompanying text.

248. See *infra* note 259 and accompanying text.

249. See *infra* note 292 and accompanying text.

250. See *supra* note 81 and accompanying text.

251. See *infra* Section III.A.

252. See *infra* Section III.B.

253. See *supra* notes 53–55 and accompanying text.

solar, and energy storage is occurring through start-ups. Solar City, for instance, makes and installs solar panels. In its first decade it grew into a company with over 10,000 employees.²⁵⁴ Ormat Technologies has built over 150 power plants, mostly geothermal and solar.²⁵⁵ The most famous renewable start-up is Tesla.²⁵⁶ More generally, renewable energy start-ups grew from receiving a negligible share of venture capital financing at the turn of the millennium to over 15% by 2011, although its share has fallen more recently.²⁵⁷

There are major advantages in encouraging energy transition investments in start-ups. First, it opens up a new category of investors and hence a source of funds. Some investors prefer investing in start-ups to investing in public companies—the risks are much greater, but so are the potential rewards.²⁵⁸ A second, perhaps more important reason, is that a thriving start-up sector can explore a greater number of new ideas and approaches, allowing for more diverse perspectives as to what technologies might be worth trying. Also, unlike major existing energy or transportation companies, new start-ups are less tied to the status quo.²⁵⁹ If a new technology risks disrupting that status quo and thus hurting existing investments and relationships, entrepreneurs starting new companies will have few qualms about doing so. Assuming that we are better off exploring a wide range of possible approaches to handling energy transition, creating a legal and financial environment that encourages entrepreneurship is an attractive option.

Securities law can be a significant barrier to investment in start-up companies, but recent changes in the law may be easing that barrier. Of particular note are new rules providing more space for equity crowdfunding and related activities.

Securities law forms a barrier to new investment through its requirement that any issuance of a security must be registered with the SEC unless it is subject to an exemption from the registration requirement.²⁶⁰ Shares in corporations are securities,²⁶¹ and equity interests in other kinds of business associations such as limited liability companies may also be securities, depending on the nature of the interest.²⁶² Some kinds of debt investments are also security interests.²⁶³ Thus, many kinds of investment in start-up companies will count as security interests, and hence

254. *SolarCity*, WIKIPEDIA, <https://en.wikipedia.org/wiki/SolarCity> [<https://perma.cc/9JDP-QW4P>] (last updated Sept. 6, 2018).

255. *Ormat Technologies*, WIKIPEDIA, https://en.wikipedia.org/wiki/Ormat_Technologies [<https://perma.cc/CG8T-QKV8>] (last updated July 29, 2018).

256. *Tesla, Inc.*, WIKIPEDIA, https://en.wikipedia.org/wiki/Tesla,_Inc. [<https://perma.cc/E3MD-FJ72>] (last updated Sept. 17, 2018).

257. Devashree Saha & Mark Muro, *Cleantech Venture Capital: Continued Decline and Narrow Geography Limit Prospects*, BROOKINGS (May 16, 2017), <https://www.brookings.edu/research/cleantech-venture-capital-continued-declines-and-narrow-geography-limit-prospects> [<https://perma.cc/S7NA-A5RQ>]. For further discussion of venture capital investments in cleantech, see Chiang, *supra* note 13, at 673–75.

258. This is the central financial point of venture capital investing. See Ibrahim, *supra* note 50, at 1410–12.

259. See sources cited *supra* note 257.

260. Securities Act of 1933 §§ 3–5, 15 U.S.C. § 77d–e (2012).

261. *Id.* § 2(a)(1).

262. See SEC v. W.J. Howey Co., 328 U.S. 293 (1946).

263. See *Reves v. Ernst & Young*, 494 U.S. 56 (1990).

must be registered unless subject to an exemption. Registration with the SEC is prohibitively expensive for new businesses, costing hundreds of thousands of dollars or more with ongoing costs for required disclosures once a company has gone public.²⁶⁴ Hence, new businesses must either seek investments that do not take the form of security interests or else structure their offering of securities in a way that qualifies for an exemption from the registration requirement.

There are a variety of exemptions to the registration requirement available. However, each exemption comes with its own set of limitations. The in-state exemption requires all sales to occur within one state.²⁶⁵ A family of exemptions cover private offerings, in which the number and kind of persons who buy the securities are limited.²⁶⁶ However, these offerings restrict how an offering can be publicized, who can buy, the amount that can be raised, and in some cases require that fairly extensive information be given to the buyers. Depending upon the situation, one or more of these limitations can be quite onerous.

As noted, though, new rules have loosened some of these limitations. Of particular note is the JOBS Act,²⁶⁷ passed in 2012. This Act, among other things, eliminated a major constraint on one of the most popular exemptions and created a new exemption. As to the former, a family of several exemptions was created by the SEC in Regulation D.²⁶⁸ This has become a leading go-to source of exemption for many security offerings. However, one major limitation for all Regulation D offerings was that there could be no “general solicitation.” This was strictly construed by the SEC and severely limited what issuers or those aiding them could do to publicize an offering.²⁶⁹ The JOBS Act eliminated the general solicitation prohibition in Regulation D offerings.²⁷⁰ Among other things, this should make it possible to put Regulation D offerings online and make them more widely known.

This change enhances the potential for new companies in the clean energy field to find investors by listing their offerings online and actively advertising those offerings online as well. That may become one way in which investors engage in equity crowdfunding, which is described further below. However, Regulation D offerings still restrict buyers to “accredited investors,” who (among other things) must have an annual income of more than \$200,000 (\$300,000 for married couples) or a net worth of more than \$1,000,000.²⁷¹ Those requirements severely limit who can invest in Regulation D offerings. To realize the full potential benefits of crowdfunding, a rule without that limit is needed. The JOBS Act created such a rule.

264. *Considering an IPO To Fuel Your Company's Future?*, PWC (Oct. 17, 2018, 9:20 PM), <https://www.pwc.com/us/en/services/deals/library/cost-of-an-ipo.html> [<https://perma.cc/P9FG-KPVA>].

265. Securities Act of 1933 § 3(a)(11), 15 U.S.C. §77c (2012); Rule 147, 17 C.F.R. § 230.147 (2017).

266. 17 C.F.R. §§ 230.501–230.905 (2018).

267. Jumpstart Our Business Startups (JOBS) Act, Pub. L. No. 112-106, 126 Stat. 306 (2012) (codified as amended in scattered sections of 15 U.S.C.).

268. 17 C.F.R. §§ 230.501–230.905 (2018).

269. Patrick Daugherty, *Rethinking the Ban on General Solicitation*, 38 EMORY L.J. 67, 68–69 (1989).

270. JOBS Act § 201.

271. 17 C.F.R. § 230.501(a)(5)–(6) (2018).

Crowdfunding, broadly speaking, involves raising money for activities by soliciting to the general public online. Crowdfunding has been around for many years, with the best-known crowdfunding site being Kickstarter.²⁷² Until now, though, crowdfunding has been limited to donative or rewards versions. In a donative version, funders simply give money to a person, company, or project and receive nothing in exchange. In a rewards version, funders do receive something in return. That something may be a small gift item, or it may be a promise to receive an item of the good or service being funded.

What crowdfunding has not been able to receive is stock or bonds issued by a business being funded. That would constitute the offer and sale of securities, and no previous exemption allowed such an offer and sale to the general public. Pursuant to the new rules created by the JOBS Act, crowdfunding issuers may now put their offers online for the general public to see; however, only accredited investors may buy.²⁷³

But another section of the JOBS Act created a new exemption intended to allow the crowdfunding of securities to nonaccredited investors,²⁷⁴ and the SEC has recently put into place the regulations needed to make this exemption available.²⁷⁵ The intention is to make equity and debt crowdfunding an important new way for smaller businesses to raise money.²⁷⁶ This new source of fundraising is not specific to energy transition or related industries and investments, but it could be used by new businesses in the area.

However, the new crowdfunding rules are subject to particular restrictions, similarly to other exemptions. There has been much debate over these restrictions, with many arguing that they are too tight, and hence that the new rules will not work as intended to create a major market for securities crowdfunding.²⁷⁷ Time will tell whether these concerns are realized. The rest of this Section details the rules and argues that if they do turn out to be quite restrictive, Congress or the SEC should explore ways to loosen them, so as to encourage a wider range of investment in new businesses.

The new crowdfunding rules have a number of restrictions. Among the most important are the following:

- No more than \$1,070,000 can be raised in one crowdfunded offering.²⁷⁸ Given the significant costs created by some of the other restrictions, this may imply

272. KICKSTARTER, <https://www.kickstarter.com/> [<https://perma.cc/44UP-BSJP>].

273. See *supra* notes 270–271 and accompanying text.

274. CROWDFUND Act, Pub. L. No. 112-106, 126 Stat. 315 (2012) (codified as amended in scattered sections of 15 U.S.C.).

275. Crowdfunding, Exchange Act Release No. 33-9974, 2015 WL 7273273 (Oct. 30, 2015).

276. See Andrew C. Fink, *Protecting the Crowd and Raising Capital Through the CROWDFUND Act*, 90 U. DETROIT MERCY L. REV. 1, 15–19 (2012).

277. See, e.g., Stuart R. Cohn, *The New Crowdfunding Registration Exemption: Good Idea, Bad Execution*, 64 FLA. L. REV. 1433 (2012); Edmund W. Kitch, *Crowdfunding and an Innovator's Access to Capital*, 21 GEO. MASON L. REV. 887 (2014); Jason W. Parsont, *Crowdfunding: The Real and the Illusory Exemption*, 4 HARV. BUS. L. REV. 281 (2014).

278. Securities Act of 1933 § 4(a)(6)(A), 15 U.S.C. § 77d(a)(6)(A) (2012); see also *Regulation Crowdfunding: A Small Entity Compliance Guide for Issuers*, U.S. SEC. & EXCH. COMM'N (May 13, 2016), <https://www.sec.gov/info/smallbus/secg/rccomplianceguide->

that issuers will not be able to raise enough money via crowdfunding to justify the costs.

- The amount a person can invest in all crowdfunded offerings in a year is capped, with the cap set anywhere from \$2000 to \$100,000, depending upon the person's income/wealth.²⁷⁹
- The web sites on which crowdfunding can occur must register with the SEC and, through that, are subject to some regulations.²⁸⁰
- There are limits on how either the issuers or web sites can publicize offerings.²⁸¹
- Crowdfunding issuers must provide a significant amount of information, especially financial information, which may prove costly to produce.²⁸²

Of these, it is the interaction between the limit on the amount that can be raised and the costs of producing the required information that has probably caused the most skepticism about the financial attractiveness of crowdfunding under the new rules. Since the rules went into effect on May 15, 2016, experience with using the new rules remains limited.

Fearing the federal rules will be too costly, many states have enacted crowdfunding rules for offerings within their states.²⁸³ Of course, limiting investors to those in-state is a serious limit, but since investment in businesses tends to be localized anyway, if the other limits on these offerings are loose enough, these could prove an attractive legal basis for crowdfunding. The SEC has changed its rules on the intrastate offering exemption to make it easier for such offerings to be exempt under federal law.²⁸⁴

So, through a combination of the technological and social invention of the internet with new legal rules, crowdfunding could become a major new way for new and small businesses to raise money, including businesses pursuing ideas for speeding energy transition.²⁸⁵ Experience over the next few years should help clarify how far the new rules go in allowing securities crowdfunding.

If it turns out that the new rules remain quite restrictive, so that they are not widely used, the benefits of new sources of investment for innovative start-ups discussed above suggest strongly considering further loosening of the rules. Of course, there are costs that must be considered as well—less restrictive rules will make online

051316.htm [<https://perma.cc/FM5S-QSRR>] (last updated April 5, 2017). The original statutory limit was \$1,000,000, but that has been adjusted for inflation. See *Investor Bulletin: Crowdfunding Investment Limits Increase*, U.S. SEC. & EXCH. COMM'N (May 5, 2017), https://www.sec.gov/oiea/investor-alerts-and-bulletins/ib_crowdfundingincrease [<https://perma.cc/HHW4-KTG3>].

279. Securities Act § 4(a)(6)(B).

280. Securities Act § 4A(a)(1)(B).

281. Securities Act § 4A(b)(2).

282. Securities Act § 4A(b).

283. Michael Vignone, *Inside Equity-Based Crowdfunding: Online Financing Alternatives for Small Businesses*, 91 CHI.-KENT L. REV. 803, 810–15 (2016).

284. Exemptions to Facilitate Intrastate and Regional Securities Offerings, Exchange Act Release No. 33-10238, 2016 WL 6872611 (Oct. 26, 2016).

285. For an extended discussion of the potential role of crowdfunding in financing renewable energy, see Chiang, *supra* note 13, at 678–94.

securities fraud easier and more common.²⁸⁶ The costs and benefits of that broader tradeoff are beyond the scope of this Article; it focuses on a particular kind of benefit focused on one specific, albeit quite economically and socially important, area of new business and investment.

Despite this limitation, we think this discussion offers a useful perspective that cuts against the grain of the usual politics of both environmental and financial regulation, which is important at this moment of intense partisanship around energy and climate change.²⁸⁷ Those urging aggressive action to combat climate change tend to fall on the left end of the political spectrum and to be seen as favoring aggressive government regulation. Persons on that end of the spectrum also tend to favor more aggressive forms of financial regulation. Yet this Section argues that a form of financial deregulation could be a major aid in the fight against climate change. It does so by calling attention to the highly useful role that can be played by investments in new, small businesses and projects. In the area of investment in energy transition, an opportunity exists for bipartisanship that could support energy transition because of potentially substantial economic benefits of reducing financial regulation.²⁸⁸ Sometimes, addressing climate change may be achieved not by strengthening regulations but rather by loosening them.

B. Social Enterprise and Benefit Corporations

As noted in the prior Part's discussion of fiduciary duties, one concern about convincing the managers of corporations to make choices that speed energy transition is that an exclusive focus on the bottom line of increasing shareholder value makes those managers deaf to the appeal of avoiding climate change unless doing so advances that bottom line. At any rate, nothing in their duty to the corporation requires them to take the effect of their decisions on the environment independently into account.²⁸⁹

But recent years have seen the growth of a new kind of business, one that straddles the gap between for-profits and nonprofits. These social enterprises pursue dual goals: achieving profits for their equity investors, while also pursuing specific or general social goods.²⁹⁰ They are meant to attract entrepreneurs, investors, employees, and customers who want attractive financial outcomes while also making the world a better place. As indicated above,²⁹¹ start-ups are already playing a significant role in advancing cleaner energy technologies. However, social enterprises can and are helping push that investment further. Social enterprises may be willing to take on projects that conventional for-profits will not, either because expected returns are too low, or the risks are too high, or profits may take too long

286. See Thomas Lee Hazen, *Crowdfunding or Fraudfunding? Social Networks and the Securities Laws—Why the Specially Tailored Exemption Must Be Conditioned on Meaningful Disclosure*, 90 N.C. L. REV. 1735 (2012).

287. See Osofsky & Peel, *supra* note 38.

288. See *id.*

289. See *supra* notes 220–230 and accompanying text.

290. Robert A. Katz & Antony Page, *The Role of Social Enterprise*, 35 VT. L. REV. 59, 59 (2010); Heerad Sabeti, *The For-Benefit Enterprise*, HARV. BUS. REV., Nov. 2011, at 99, 100.

291. See *supra* notes 254–257 and accompanying text.

to achieve. Indeed, social enterprises have been involved in the renewable energy field for some time.²⁹²

Over the past decade or so, several new legal forms of business association have been created to help address the special needs of social enterprises. The leading new form, the benefit corporation, was briefly described earlier. As noted above,²⁹³ benefit corporations are mostly governed by ordinary for-profit corporation law, but their purpose and fiduciary duties focus on creating social benefits as well as profits, and they must regularly report on what they have done to create social benefits. Benefit corporations, unlike nonprofits, allow equity investors to earn a financial return, while unlike ordinary for-profits, there is no legal concern that pursuing public goods at the expense of profit may violate any fiduciary duty.²⁹⁴

More critically, the duty to pursue public benefits and report on that pursuit may act as a commitment device.²⁹⁵ Investors, employees, and consumers may want to become involved in social enterprises but may fear that a business that bills itself as socially committed may be making an unserious claim. If a business is a benefit corporation, though, investors who believe that has happened may be able to sue, claiming a breach of the duty to pursue public benefits. They will also receive a regular report about what the business has done for the public good and may also be able to sue if they believe that report is fraudulent.²⁹⁶

So far, several thousand companies have chosen to be benefit corporations.²⁹⁷ These are mostly small, closely held businesses, many of them newly formed. Some benefit corporations choose to be certified as B corps by B Lab, the entity that came up with the idea of benefit corporations. Of 1774 B Lab certified companies, twenty-one are in the industry category labelled “Renewable Energy Generation & Installation.”²⁹⁸

Benefit corporations are not the only new legal form designed for social enterprises. Social welfare corporations,²⁹⁹ and in Minnesota specific benefit corporations,³⁰⁰ are like benefit corporations, but focused on only a specifically identified public benefit, rather than committed to pursuing a broad range of public benefits.³⁰¹ The low-profit limited liability company, or L3C, is a limited liability

292. Dan van der Horst, *Social Enterprise and Renewable Energy: Emerging Initiatives and Communities of Practice*, 4 SOC. ENTERPRISE J. 171, 171 (2008).

293. See *supra* notes 241–246 and accompanying text.

294. *Id.*

295. Brett H. McDonnell, *Committing to Doing Good and Doing Well: Fiduciary Duty in Benefit Corporations*, 20 FORDHAM J. CORP. & FIN. L. 19, 34 (2014); Joseph W. Yockey, *Does Social Enterprise Law Matter?*, 66 ALA. L. REV. 767, 782 (2015).

296. See *supra* notes 244–245 and accompanying text.

297. Ellen Berrey, *How Many Benefit Corporations Are There?*, (University at Buffalo, SUNY, University of Denver, 2015), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2602781 [<https://perma.cc/CX9J-CAJP>] (counted 2144 benefit corporations as of April 2015).

298. *B Corp Directory*, CERTIFIED B CORP., <https://bcorporation.net/directory/find-a-b-corp> [<https://perma.cc/56JG-Q9RQ>].

299. WASH. REV. CODE ANN. §§ 23B.25.005–23B.25.150 (West 2013 & Supp. 2018); CAL. CORP. CODE §§ 2500–3503 (West 2014 & Supp. 2018).

300. MINN. STAT. ANN. § 304A.021(8) (West Supp. 2018).

301. Dana Brakman Reiser, *The Next Big Thing: Flexible Purpose Corporations*, 2 AM. U.

company (LLC) which furthers one or more charitable purpose and “no significant purpose of the company is the production of income or the appreciation of property.”³⁰² The cited language comes from the definition of program-related investments under federal tax laws,³⁰³ and L3Cs were created as potential vehicles for such tax-favored investments by charitable foundations. So far, though, the IRS has refused to recognize any special status for investments in L3Cs, and scholars have questioned the logic of the form.³⁰⁴ Three states have created benefit LLCs, which have the purpose and duty features of benefit corporations, but based on the LLC form.³⁰⁵ Also of note is the new generation of cooperative statutes which allows for equity investors who are not members of a cooperative’s class of patron-owners.³⁰⁶

All of these new legal entity types are in their infancy, all have relatively few adopters, and there are serious questions about each of them. These questions in part flow from debates about social enterprise more generally, above all the so-called “two masters” problem.³⁰⁷ Can entities really commit to pursuing independently both profit and the public good? How will they behave when the two conflict? How can outside investors and others tell that they are following through on that dual commitment? Perhaps it will turn out that social enterprises ultimately flounder in the face of these questions, but so far these questions remain unresolved.

Moreover, social enterprises involved in energy transition present potentially attractive investments for a variety of types of institutions and persons interested in directing their money towards businesses that are addressing climate change. Depending upon both the person giving money and the company receiving it, investments can take many forms, including:

- donations;
- loans at below market rates;
- loans at market rates;
- preferred shares, at below market or market rates; or
- common equity.

For one important type of potential investor, charitable foundations, a legal restriction discussed above³⁰⁸ may limit their ability to invest in social enterprises. Investments that jeopardize a foundation’s charitable purpose through low returns

BUS. L. REV. 55, 58 (2012).

302. VT. STAT. ANN. tit. 11, § 4162(2) (2016).

303. See *infra* note 311 and accompanying text.

304. See Carter G. Bishop, *The Low-Profit LLC (L3C): Program Related Investment by Proxy or Perversion?*, 63 ARK. L. REV. 243 (2010); Daniel S. Kleinberger, *A Myth Deconstructed: The “Emperor’s New Clothes” on the Low-Profit Limited Liability Company*, 35 DEL. J. CORP. L. 879 (2010).

305. A website tracking the status of social enterprise legislation shows Maryland, Pennsylvania, and Oregon as having benefit LLC statutes. *Status Tool*, SOC. ENTERPRISE L. TRACKER, <http://www.socentlawtracker.org/#/blles> [<https://perma.cc/62VN-73ZU>].

306. See James B. Dean & Thomas Earl Geu, *The Uniform Limited Cooperative Association Act: An Introduction*, 13 DRAKE J. AGRIC. L. 63 (2008).

307. Mark J. Loewenstein, *Benefit Corporations: A Challenge in Corporate Governance*, 68 BUS. LAW. 1007, 1011 (2013).

308. See *supra* notes 104–108 and accompanying text.

are subject to an excise tax.³⁰⁹ However, there is an exception to this rule for program-related investments (PRI), defined as “investments, the primary purpose of which is to accomplish one or more of the purposes described in section 170(c)(2)(B), and no significant purpose of which is the production of income or the appreciation of property, shall not be considered as investments which jeopardize the carrying out of exempt purposes.”³¹⁰

To qualify as a PRI, it must thus be the case that “no significant purpose” is “the production of income.”³¹¹ Much uncertainty surrounds the interpretation of this language, making many foundations cautious in relying on the PRI exception.³¹² Although the IRS recently provided more guidance on types of investments that do and do not count as PRI, it explicitly refused to give more guidance as to how status under one of the social enterprise statutes might help establish an organization as a proper recipient of PRI.³¹³ If returns on an investment are low enough (e.g., a very low-interest loan), that can help ensure an investment will be treated as a PRI. However, the closer an investment comes to a market-rate return, the harder it may be to ensure the IRS will refuse to treat it as PRI.³¹⁴ This may discourage foundations from a range of investments that fall in-between market-rate returns and quite low returns. Many potential investments in social enterprises could fall in that range.

The new economic and social institutions discussed in this and the previous subsection may be usefully combined. For instance, social enterprises may raise money by crowdfunding. Crowdfunding began with pure donations, so investors interested in crowdfunding already start with a vision that is not purely focused on economic returns.³¹⁵ And both crowdfunding and social enterprise are new social phenomena that appeal especially to a younger generation of investors.³¹⁶

Like crowdfunding, the new social enterprise statutes represent a departure in regulatory approach for progressives and environmental activists. New business forms like benefit corporations are enabling legislation but are not prescriptive. The new alternative is there to help solve problems faced by a growing group of entrepreneurs and investors. If any of the new statutes succeed in addressing this emerging social need, they will thrive; if not, then they will not. This promarket, enabling approach helps explain the rapid growth of benefit corporation statutes in a

309. I.R.C. § 4944 (2012).

310. *Id.* § 4944(c).

311. *Id.*

312. FREMONT-SMITH, *supra* note 89, at 279.

313. IRS Examples of Program-Related Investments, 81 Fed. Reg. 24014, 24016 (Apr. 25, 2016).

314. Under the regulations implementing the PRI rules, “in determining whether a significant purpose of an investment is the production of income or the appreciation of property, it shall be relevant whether investors solely engaged in the investment for profit would be likely to make the investment on the same terms as the private foundation.” Treas. Reg. § 53.4944-3(a)(2)(iii) (2016).

315. Christine Hurt, *Pricing Disintermediation: Crowdfunding and Online Auction IPOs*, 2015 U. ILL. L. REV. 217, 258.

316. Brett H. McDonnell, *Benefit Corporations and Public Markets: First Experiments and Next Steps*, 40 SEATTLE U. L. REV. 717, 730 (2017).

partisan environment: liberals like social responsibility, and conservatives appreciate the market-based approach.³¹⁷

Finally, it is worth noting that the existence of innovative new companies in the start-up and social enterprise sectors discussed in this and the previous subsection has feedback effects on the strategy and behavior of large established companies that have significant investments in fossil fuel energy sources. As these status quo organizations face new challengers (and see new market opportunities), they may feel pressure to diversify their investments and research, so that if cleaner energy does come to dominate the world economy in the future, those companies have a chance of surviving in that new world. For example, a number of the world's largest oil and gas companies are increasingly investing in renewable energy and energy storage.³¹⁸

CONCLUSION: TOWARDS MORE EFFECTIVE PRIVATE SECTOR ENERGY TRANSITION

This Article explores how corporate and securities law mechanisms can both shift investment patterns away from carbon-intensive fossil fuels and encourage reinvestment in clean energy technology. It argues that energy divestment strategies alone are insufficient.³¹⁹ Regarding the fossil fuel divestment movement—its high-profile successes and moral force notwithstanding—significant questions remain over its direct economic effects on the carbon market economy and the current market dominance by fossil fuels.³²⁰ Other strategies which have a direct or indirect goal of promoting a shift in investment away from fossil fuels—such as those harnessing disclosure requirements, shareholder proposals or fiduciary duties of company or trustee directors—have achieved some modest results to date.³²¹ However, whether greater climate risk disclosure by companies translates to cleaner energy business practices over the longer term is more difficult to assess at this juncture.³²² Also, legal questions regarding whether the scope of fiduciary duties allow directors and fund managers to take proactive measures on climate change are largely untested and substantial barriers remain; these include incentives for short-term profit maximization over long-term climate risk management and concerns about how courts might construe the requirements of the business judgement rule.³²³

But even if challenges to the transformational impact of current divestment strategies were less daunting, they also face a more fundamental limitation. Key to realizing the potential of energy divestment strategies in private sector energy transition will be creating pathways for reinvestment in clean energy technologies,

317. Brett McDonnell, *Benefit Corporations and Strategic Action Fields or (The Existential Failing of Delaware)*, 39 SEATTLE U. L. REV. 263, 283 (2016).

318. Ron Bousso & Clara Denina, *Shell Buying Spree Cranks Up Race for Clean Energy*, REUTERS (Jan. 26, 2018), <https://www.reuters.com/article/us-shell-m-a/shell-buying-spree-cranks-up-race-for-clean-energy-idUSKBN1FF1A8> [<https://perma.cc/L95E-5SHZ>].

319. *See supra* Part II.

320. *See supra* Section II.A.

321. *See supra* Sections II.B–D.

322. *See id.*

323. *See id.*

from R&D to bringing them to market scale.³²⁴ Conventional mechanisms for facilitating energy investment, such as subsidies, can be and are being used to do so.³²⁵ However, their impact on energy continues to be mixed, particularly in the U.S. context where subsidies promote renewable energy development but also underpin the continuing dominance of fossil fuels.³²⁶

Other legal tools for supporting reinvestment canvassed in Part III have received far less attention by scholars, policymakers, and advocates focused on decarbonization. But they offer important potential to enhance energy reinvestment. These pathways, based on new rules introduced by the JOBS Act for crowdfunding start-ups and innovations in corporation law to enable novel forms of social enterprise through benefit corporations, have the potential to combine in useful ways to aid investment flows to clean energy companies.³²⁷ In particular, they offer the potential for opening up investment in clean energy start-ups to a new range of smaller investors and for forming companies with explicit social and environmental goals in contrast to solely for-profit ones.³²⁸

Clearly, we are only at the beginning of efforts to explore the role played by evolving corporate and financial tools in fostering private sector energy transition. However, as these efforts evolve, it will be important to consider the synergies among different divestment and reinvestment pathways and how they might be more closely tied together to promote essential energy transition and mitigation of greenhouse gas emissions to avert dangerous climate change.

This Article began, in its introduction, by mapping how external investment and internal corporate decision-making could operate synergistically to encourage divestment and reinvestment. This conclusion builds from that map to propose specific strategies for tying the four quadrants of that table together. In so doing, it recognizes that key investors and corporations have significantly different positionality, and that strategies need to take this positionality into account. It therefore focuses on two categories of important actors for divestment and reinvestment—(1) external investors and (2) internal corporate decisionmakers—and explores how the options for combining these strategies will vary within them. The following figure depicts how those actors interact with the tools in the two pathways.

324. *See supra* Section I.A.

325. *See id.*

326. *See id.*

327. *See supra* Part III.

328. *See id.*

Figure: Pathways for Energy Reinvestment



For external investors, two key factors will influence what combination of these tools will most effectively drive energy reinvestment. First, as explored in depth in Section II.A, investors vary significantly in how constrained they are in considering factors beyond profit maximization.³²⁹ Investors with fewer constraints will be more likely to be responsive to pressures to divest, and more open to investment in the new types of corporations described in Section III.B.³³⁰

Second, external investors diverge in their level of interest, and perhaps more importantly, the level of interest of their key constituencies in a shift to lower-carbon energy. Those with higher levels of interest are more likely to be willing to divest and use securities disclosure and interpretations of duties to support their approaches.³³¹ They also are more likely to be interested in the two types of reinvestment described in Part III.³³² Depending on their size, the changes in securities law in particular may open up new reinvestment opportunities for them.³³³

The combination of these two variables will in turn influence how external investors evaluate investment risks and opportunities. Some will include accounting of climate change externalities and its likely impact on markets and investments more than others. However, those models will vary in the outcomes they produce.³³⁴ Those

329. *See supra* Section II.A.

330. *See id.*; *supra* Section III.B.

331. *See supra* Part II.

332. *See supra* Part III.

333. *See supra* Section III.A.

334. For a perspective on some of the complexities of those models, see Alastair Fraser, *Are Investment Carbon Footprints Good for Investors and the Climate?*, POL'Y OPTIONS

whose models incorporate climate change risks are more likely to make securities disclosures and consider how their duties relate to this issue, as well as to be responsive to calls for divestment and consider the opportunities created by the legal developments discussed in Part III.³³⁵

Corporate decisionmakers will similarly vary in how responsive they are to divestment and reinvestment strategies in their asset management. Corporations differ significantly both in whether and what types of fossil fuels are central to their business model. Oil and gas companies generally have higher profit margins and more capacity to invest in clean energy technologies than, for example, coal companies.³³⁶ Moreover, as discussed above, a number of oil and gas companies are working to pair natural gas with renewables as electricity sources, reinforcing those incentives.³³⁷ Fossil fuel companies with existing clean energy investments and companies working to create innovative new clean energy technologies are more likely to be more open to consideration of climate change risks and to investing in additional forms of emerging clean technology.

Other companies are not directly involved in the energy industry but are major consumers of energy through the products that they sell and their operations. Many of these companies, like Walmart, Target, and Best Buy, are considering climate change risks and working to reduce their carbon footprint, including through energy efficiency, sourcing of goods and electricity, etc.³³⁸ They might be open to investment relationships with clean energy companies as well as responsive to the divestment tools. The new companies being formed under the new forms emerging under state corporate law, especially clean energy ones, are even more likely to have incentives that align well with energy reinvestment.³³⁹

These considerations will affect how constrained corporate decisionmakers are (or perceive they are) in responding to pressure and opportunities for energy divestment and reinvestment, and their level of interest in utilizing these strategies. Mapping out the different combinations of constraints versus interests for both external investors and corporate decisionmakers yields the following matrix, with actors categorized as either Responsive, Receptive, Reluctant or Recalcitrant with respect to their potential to engage in energy divestment and reinvestment strategies.

POLITIQUES (Nov. 6, 2017), <http://policyoptions.irpp.org/magazines/november-2017/are-investment-carbon-footprints-good-for-investors-and-the-climate/> [https://perma.cc/3X6P-FLR2].

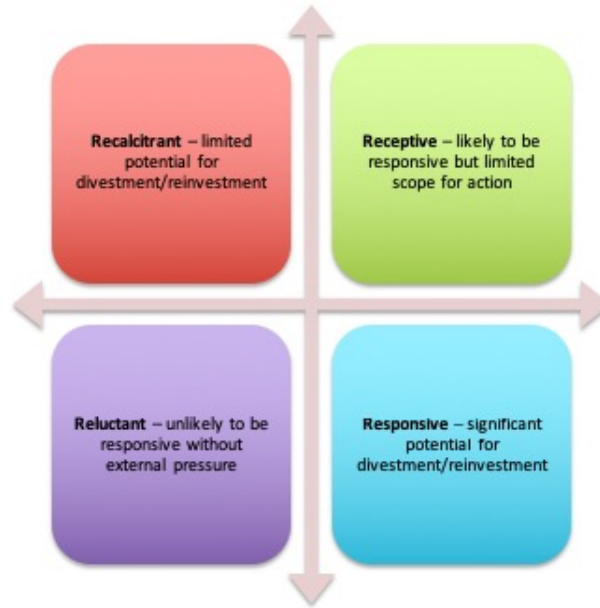
335. *See supra* Part III.

336. Osofsky & Peel, *supra* note 38, at 784.

337. *See supra* notes 66–67 and accompanying text.

338. *See, e.g., Reducing Energy Intensity and Emissions in Our Operations*, WALMART (2017), <https://corporate.walmart.com/2017grr/sustainability/reducing-energy-intensity-and-emissions> [https://perma.cc/Y8NC-5663].

339. *See supra* Section III.B.



These categories are, of course, simplifications of the more complex and nuanced reality of investor and corporate actors involved in energy markets. However, they provide a guide for regulators, decarbonization advocates, and private sector entities alike to understand which companies and funds are likely to be best positioned to engage in fossil fuel divestment and/or lead reinvestment efforts. In turn, this could foster better targeting of divestment campaigns and regulatory efforts as well as a more nuanced communication and engagement with companies and investors about their energy investment options.

Private sector energy transition will not involve a one-size-fits-all solution. Effective action requires an understanding of the energy market context for actors, paired with an appreciation of their legal and financial constraints and likely level of interest amongst shareholders or other stakeholders in pursuing a shift to lower-carbon energy. This Article, through its exploration of divestment and reinvestment pathways, aims to demonstrate how nuanced strategies can be developed to support energy transition through corporate and securities law.