OIL INDUSTRY'S PRO-CLIMATE AGENDA: FIFTY SHADES OF GREEN

Over the past two decades the oil and gas industry (or "fossil fuel" industry) has appeared to embrace climate change solutions, notwithstanding their profit-maximizing goals.[1] This is a façade. In this note, I account for historical developments amongst major oil companies in the U.S. and in Europe to investigate the true motivations behind their climate related efforts. This will include the companies' growing liabilities under the law, adverse regulations affecting their business, investor expectations shaping their trajectories, and normative pressures from the public. I hypothesize that in time, the weight of climate change will compel countries to enforce environmentally conscious policies to regulate the fossil fuel industry. For a meaningful advancement of greener policies, American and European governments need to adopt conscientious regulations that are independent of corporate influences to support the market-based solutions already initiated by Big Oil.[2]

I. INTRODUCTION

The topic of climate change is gaining traction in international law, and for good reason.[3] Scientists have crunched massive amounts of empirical data[4] to demonstrate the impending effects of the rise in global temperatures

1 The benefit of appearing "green" does not sufficiently explain the scale of investment in environmentally friendly projects that we see them undertaking today.

2 "Big Oil" refers to the world's largest oil and gas companies, which includes ExxonMobil, BP, Chevron, and Royal Dutch Shell, which will be the focus of this article.

3 "There has been a 20-fold increase in the number of global climate change laws since 1997 . . . . The database shows the extent to which climate change legislation has permeated global political discourse." Simon Evans, *Mapped: Climate Change Laws Around the World*, CARBON BRIEF (May 11, 2017, 4:00 PM), https://www.carbonbrief.org/mapped-climate-change-laws-around-world. "In the face of today's rapidly evolving environmental crises of climate change, biodiversity loss and ocean acidification, such appraisal is important for informing the world's policy-makers about how they can better develop and enforce multi-lateral governance." Saeko Ikeda & Kenji Watanabe, *What Future for International Environmental Law?*, OUR WORLD (Dec. 12, 2010), https://ourworld.unu.edu/en/what-future-for-international-environmental-law. Climate change was the top priority in the World Economic Forum in Davos, Switzerland, in January 2020. *See* Stanley Reed, *Climate Change Takes Center Stage in Davos*, N.Y. TIMES (Jan. 20, 2020), https://www.nytimes.com/2020/01/20/business/energy-environment/davos-climate-change.html.

4 "Scientists have published more than 350 peer-reviewed studies looking at weather events around the world, from heatwaves in Sweden and droughts in South Africa to flooding in Bangladesh and hurricanes in the Caribbean. The result is mounting evidence that human activity is raising the risk of some types of extreme weather, especially those linked to heat." Roz Pidcock & Robert McSweeney, *Mapped: How Climate Change Affects Extreme Weather Around the World*, CARBON BRIEF (Feb. 2, 2021, 4:30 PM), https://www.carbonbrief.org/mapped-how-climate-change-affects-extreme-weather-around-the-world.

due to intensifying carbon dioxide concentrations.[5] The subsequent melting of polar glaciers is dangerously altering ocean currents,[6] causing extreme weather patterns throughout the world.[7] Given the increased frequency and severity of weather anomalies, the US sustained over $500 billion in losses from 2015-2019.[8] The dangers and exorbitant costs associated with climate change have accelerated the need for global cooperation and legislation in environmental law. While successful rulemaking on climate change has been slow, U.S. and European fossil fuel companies have themselves initiated efforts to combat global warming.[9] Leaders of these megacorporations are now are in the front seats of the climate change debate, governing the conversations around future regulations.[10] However, it may not be logical to have the biggest contributors of global warming be present at the legislative table, mapping out restrictions of their own

5 *See* graph providing evidence that atmospheric CO2 level has increased since the Industrial Revolution of the eighteenth century, *Climate Change: How Do We Know?*, NASA, https://climate.nasa.gov/evidence/ (last visited May 13, 2021). "Multiple studies published in peer-reviewed scientific journals show that 97 percent or more of actively publishing climate scientists agree . . . ." *Scientific Consensus: Earth's Climate is Warming*, NASA, https://climate.nasa.gov/scientific-consensus/ (last visited May 14, 2021).

6 "[N]ew research . . . suggests that the amount of salt in seawater is varying in direct response to man-made climate change." Amber Jenkins, *With a Pinch of Salt*, NASA (Apr. 19, 2009), https://climate.nasa.gov/news/58/with-a-pinch-of-salt/. "These currents control how heat is carried within the oceans and ultimately regulate the world's climate." *Id.*

7 *See Extreme Weather*, NAT'L CLIMATE ASSESSMENT, https://nca2014.globalchange.gov/highlights/report-findings/extreme-weather (last visited May 14, 2021) (detailing types of extreme, man-made weather patterns including heat waves, droughts, heavy downpours, floods, hurricanes, thunderstorms, tornadoes, etc.). The 2004 movie *The Day After Tomorrow* is a Hollywood portrayal of the far-reaching effects of the altering ocean currents caused by melting glaciers, precipitating into an ice age. THE DAY AFTER TOMORROW (Twentieth Century Fox et al. 2004).

8 Rebecca Hersher & Nathan Rott, *What Are the Costs of Climate Change?*, NPR (Sept. 16, 2020, 4:06 PM), https://www.npr.org/2020/09/16/913693655/what-are-the-costs-of-climate-change.

9 "In essence, there are four main ways in which oil companies can reduce GHG [greenhouse gas] emissions: (1) increasing energy conservation and efficiency; (2) switching to fuels with lower carbon content; (3) investing in renewable energy sources; and (4) decarbonizing flue gases through carbon dioxide (CO2) separation and sequestration. Most large oil companies are engaged in options (1) and (4), while switching from coal to oil to gas as well as more long-term investments in renewables represent more significant changes." JON BIRGER SKJÆRSETH & TORA SKODVIN, CLIMATE CHANGE AND THE OIL INDUSTRY: COMMON PROBLEM, DIFFERENT STRATEGIES 14.

10 "There are significant differences between the carbon tax proposal backed by Big Oil and the approaches backed by environmental activists." ExxonMobil and others are "backing a campaign to get their favored version of a carbon tax introduced in the Senate…that would also protect them from other climate regulations and lawsuits." Marianne Lavelle, *Carbon Tax Plans: How They Compare and Why Oil Giants Support One of Them*, Inside Climate News, https://insideclimatenews.org/news/07032019/carbon-tax-proposals-compare-baker-shultz-exxon-conocophillips-ccl-congress.

future.[11] We are inundated with dialogues around "sustainable energy" by the oil and gas industry, concealing their true intentions geared towards minimizing liability associated with continued petroleum production and maintaining a steady demand for fossil fuels.[12] These corporations previously marginalized[13] the effects of rising carbon emissions in an effort to increase oil-dependency[14] and be able to sell petroleum-based products[15]––the leading cause of man-made global warming.[16] Lately, these multinational, profit-maximizing entities[17] have anticipated stricter regulations and a public demand for newer, greener technologies and renewable resources.[18] Faced with the need to balance new environmental costs and growing shareholder pressures shaped by the public's

11 While successful negotiations warrant the presence of all parties, the oil industry's dominating presence thwart effective legislation. They lobby the government to shift the blame away from themselves and craft laws to support the long-term viability of the industry. *Id.* In reality, environment conditions that affect us today (such as excessive flooding, record breaking heat, snowstorms, and wildfires) warrant drastic industry-wide legislation which these companies would invariably oppose. Government regulations ought to be insulated from influences of big market actors for effective rulemaking.

12 Although we can never know the industry's *true* intentions, this is a fair assumption.

13 Kolk & Levy, *infra* note 23.

14 Demand for crude oil is inelastic. Inelastic demand means buyers of oil are so *dependent* on this resource, that their demand does not drop despite rising oil prices. *See* Carmine Difiglio, *Oil, Economic Growth and Strategic Petroleum Stocks*, 5 ENERGY STRATEGY REVS. 48, 50 (2014).

"[T]echnological breakthroughs in extracting hydrocarbons from new geological frontiers (for example, sub-salt and pre-salt deepwater, shale, and tar sands) surprisingly regenerated North American oil and gas resources. . . . But the seductive, novel forms of oil and gas also carry environmental risks and may lure the nation further into a technological dependence on fossil fuels that will be ever more difficult to escape." Tyler Priest, *The Dilemmas of Oil Empire*, 99 J. AM. HIST. 236, 236–37 (2012).

15 *See Products Made from Petroleu*m, RANKEN ENERGY CORP., https://www.ranken-energy.com/index.php/products-made-from-petroleum/ (last visited May 17, 2021).

16 "A first-of-its-kind study published in the scientific journal *Climatic Change* links global climate changes to the product-related emissions of specific fossil fuel producers, including ExxonMobil and Chevron. . . . The result: they are responsible for about *one-half* of the rise in average global temperatures and close to *one-third* of sea level rise." Karl Burkart, *Top Fossil Fuel Companies Are Driving Half Of Global Warming*, LEONARDO DICAPRIO FOUND. (Sept. 11, 2017), https://www.leonardodicaprio.org/top-fossil-fuel-companies-are-driving-half-of-global-warming/ (emphasis added). "Burning oil releases carbon dioxide into the atmosphere, contributing to the warming of our planet. In 2013, petroleum accounted for 41 percent of the U.S.'s carbon dioxide emissions from fossil fuels." *Oil: When We Drill, We Spill*, GREENPEACE, https://www.greenpeace.org/usa/ending-the-climate-crisis/issues/oil/#:~:text=The%20Problem%20With%20Oil%3A%20Global,dioxide%20emissions%20from%20fossil%20fuels (last visited May 17, 2021). *See generally* Melissa Denchak, *Fossil Fuels: The Dirty Facts*, NRDC (June 29, 2018), https://www.nrdc.org/stories/fossil-fuels-dirty-facts.

17 "For decades, elected leaders and corporate executives have chased a dream of independence from unstable or unfriendly foreign oil producers. Mission accomplished: Oil companies are producing record amounts of crude oil and natural gas in the United States and have become major exporters." Clifford Krauss, *U.S. Oil Companies Find Energy Independence Isn't So Profitable* (June 30, 2019), https://www.nytimes.com/2019/06/30/business/energy-environment/oil-companies-profit.html.

18 Investors in the last two years are increasingly considering "the risks of high-carbon companies and industries as well as the returns available from low-carbon alternatives." Reed, *supra* note 3.

environmental concerns, corporations have realigned their business interests and adjusted their corporate strategy by pledging to greener emissions and long-term sustainability over the decades.[19] In this note, I will summarize the progressions of major oil companies in the U.S. and Europe to chronicle the industry's stance on climate change and account for regional differences between the climate change policies of U.S. and Europe.[20] This gives light to the best ways in which Western governments can foster creation of effective climate change regulations in the decades to follow.

II. DIVERGENCE BETWEEN U.S. AND EUROPEAN OIL AND GAS COMPANIES

American and European oil companies have diverged in their response to environmental concerns. To exhibit these differences, BP (formerly The British Petroleum Company and BP Amoco, headquartered in London) and Royal Dutch Shell ("Shell," headquartered in the Netherlands and incorporated in the United Kingdom) will serve as exemplars for the European oil industry. Exxon Mobil Corporation[21] ("Exxon," headquartered

19 *See* Ben Geman, *Why Oil Companies Are Asking for More Regulation*, ATLANTIC (May 5, 2014), https://www.theatlantic.com/politics/archive/2014/05/why-oil-companies-are-asking-for-more-regulation/447117/. For example, "ExxonMobil and Chevron formally joined a coalition of some of the world's biggest energy companies in the Oil and Gas Climate Initiative (OGCI). The group, which has committed $1 billion to funding promising energy ventures to reduce emissions, announced a goal to cut their release of methane, the second most prevalent greenhouse gas, by one-third by 2025." Justin Worland, *Oil Companies Say They're Going Green. Here's What that Would Mean for the Fight Against Climate Change*, TIME (Oct. 4, 2018, 2:20 PM), https://time.com/5415263/president-trump-oil-companies-carbon-capture-climate-change/. "Other climate initiatives from oil and gas companies include a push for a carbon tax from companies like ExxonMobil, endorsement of the Paris Agreement from initiatives like OGCI and support for federal incentives to advance carbon capture from companies like Oxy." *Id.*

20 "[F]our indicators as the basis for our assessment of the companies' climate strategy choice: the corporations' acknowledgement of the problem of a human-induced global climate change; their positions on the Kyoto Protocol; their GHG emissions targets and measures to achieve those targets; the degree of reorientation in their core business areas." SKJÆRSETH & SKODVIN, *supra* note 9, at 14. While this Note does not take the approach of delineating the companies' stance on each of these four policies, it is helpful to understand each policy can serve as a "distinction between reactive/defensive, proactive/offensive, indifferent, and innovative strategies." *Id.* at 13.

21 *See* History of the Oil and Gas Industry, The Library of Congress (2006), https://www.loc.gov/rr/business/BERA/issue5/history.html. In the late 1800s, "After a decade of fierce competition, Standard Oil became the industry's most dominant company controlling 80 percent of the distribution of all principal oil products, in particular kerosene.

In 1909 as a result of antitrust laws, federal courts ordered the break up of the Standard Oil Company dividing it up into 34 separate companies. Standard Oil dominated the first two decades of the oil and gas industry, and the U.S. accounted for more than half of the world's production until around 1950. As the industry became more global in nature, other world markets in Europe, Russia and Asia, began to

in Texas) and Chevron Corporation ("Chevron," parent company to Texaco,[22] headquartered in California) will exemplify the American oil industry. Plotting the historical reaction of these companies to environmental legislation, public apprehensions to climate concerns, and other market forces will help elucidate this transatlantic divide.

A. An Oil Spill as Impetus for Change

In the 1980s, the U.S. was the first to confront global warming headlines concerning fossil fuel use, dismissed by corporate lobbying efforts.[23] In 1989, the Exxon Valdez oil tanker spilled into the Prince William Sound in southern Alaska, which was considered the worst oil spill in world history at that time.[24] The consequences were prohibitively expensive sparking nationwide distress.[25] The following year, Congress responded by passing

play a much greater role. New industry giants emerged such as, Shell, Royal Dutch, and Anglo-Persian which later became British Petroleum." KATHY HESHELOW, INVESTING IN OIL AND GAS: THE ABCS OF DPPS (DIRECT PARTICIPATION PROGRAMS) (2d ed. 2010).

22 Chevron and Texaco (subsidiary of Chevron) will be used interchangeably for the purposes of this Note.

23 "Coinciding with a warm summer, global warming received considerable media and Congressional attention in 1988 and alarmed U.S. industry." Ans Kolk & David Levy, *Winds of Change: Corporate Strategy, Climate Change and Oil Multinationals*, 19 EUR. MGMT. J. 501, 503 (2001). As a result, major oil companies ganged up to form the Global Climate Coalition to lobby against regulations. Both Exxon and Chevron (then Texaco) focused on delegitimizing climate change by citing skepticism of science and lack of hard evidence. *Id.* "Exxon, made a strategic decision in the late 1980s to publicly emphasize doubt and uncertainty regarding climate change science even as its internal research embraced the growing scientific consensus." Amy Lieberman & Susanne Rust, *Big Oil Braced for Global Warming While It Fought Regulations*, L.A. TIMES (Dec. 31, 2015), https://graphics.latimes.com/oil-operations. Today, "The state of New York is suing ExxonMobil on charges that the energy goliath consistently misled its investors about what it knew concerning the climate crisis—essentially lying to them about what it might eventually cost the company in eventual climate-related financial risks, because the company knew better than practically anyone else what those risks were." Charles P. Pierce, *The Oil Giants Might Finally Pay for Pulling the Biggest Hoax of All*, ESQUIRE (Aug. 7, 2019), https://www.esquire.com/news-politics/politics/a28636123/exxonmobil-lawsuit-climage-change-new-york/. Unfortunately, Exxon continues to fund climate science deniers to this day. "A decade after pledging to end its support for climate science deniers, ExxonMobil gave $1.5 million last year to 11 think tanks and lobby groups that reject established climate science and openly oppose the oil and gas giant's professed climate policy preferences." Elliot Negin, *Why is ExxonMobil Still Funding Climate Science Denier Groups?*, UNION OF CONCERNED Scientists (Aug. 31, 2018, 12:42 PM), https://blog.ucsusa.org/elliott-negin/exxonmobil-still-funding-climate-science-denier-groups.

24 Stephen Leahy, *Exxon Valdez Changed the Oil Industry Forever—But New Threats Emerge*, NAT'L GEO. (Mar. 22, 2019), https://www.nationalgeographic.com/environment/2019/03/oil-spills-30-years-after-exxon-valdez/. "The Exxon Valdez oil spill was one of the earliest and most devastating examples of the risks posed by a changing climate." Dino Grandoni, Asaf Shalev, Michael Phillis & Susanne Rust, *The Role A Melting Glacier Played in The Exxon Valdez Oil Spill Disaster*, L.A. TIMES (Apr. 6, 2017, 3:00 AM), https://www.latimes.com/nation/la-na-exxon-valdez-20170406-story.html.

25 With the collapse of local economies and fisheries, estimates of economic loss amount to almost $2.8 billion. *See Exxon Valdez Oil Spill*, HISTORY.COM (Mar. 9, 2018),

the Oil Pollution Act of 1990 regulating the design of U.S. oil tankers and increasing the penalties associated with spills.[26] Given domestic pressures to increase transparency, Exxon and Chevron began to publish their environmental reports to the public.[27]

Confidential document leaks in 2015 show that Exxon (U.S.) and Shell (Europe) acquired evidence suggesting the causal link between rising temperatures and increased carbon dioxide concentration as a result of fossil fuel use in the 1980s.[28] Both companies had forecasted the consequences of continued CO_2 emissions, and knew about the "links between their products, global warming, and ecological calamity."[29] This information was withheld from the public in both regions, leaving their respective lawmaking bodies uninformed. Exxon and Shell effectively "lied about climate change.[30] They

---

https://www.history.com/topics/1980s/exxon-valdez-oil-spill#section_2. The spill "killed an estimated 250,000 sea birds, 3,000 otters, 300 seals, 250 bald eagles and 22 killer whales." *Id.* "Exxon [paid] about $2 billion in cleanup costs and $1.8 billion for habitat restoration and personal damages related to the spill." *Id.*

26 This was the first legislation that resulted in effective tanker modifications and penalized accidental oil spills. "[P]erhaps one of the most important elements of this law required those responsible for oil spills to foot the bill for both cleaning up the oil and for economic and natural resource damages resulting from it." *It Took More Than the Exxon Valdez Oil Spill to Pass the Historic Oil Pollution Act of 1990*, OFF. OF RESPONSE & RESTORATION (Aug. 18, 2015), https://response.restoration.noaa.gov/oil-and-chemical-spills/significant-incidents/exxon-valdez-oil-spill/it-took-more-exxon-valdez-oil-s.

27 European counterparts followed suit (BP in 1995, Shell in 1997). Kolk & Levy, *supra* note 23, at 504.

28 Benjamin Franta, *Shell and Exxon's Secret 1980s Climate Change Warnings*, GUARDIAN (Wed. 19, 2018, 6:00 AM), https://www.theguardian.com/environment/climate-consensus-97-per-cent/2018/sep/19/shell-and-exxons-secret-1980s-climate-change-warnings. "In 1982, for example, Exxon predicted that by about 2060, CO2 levels would reach around 560 parts per million – double the preindustrial level – and that this would push the planet's average temperatures up by about 2°C over then-current levels (and even more compared to pre-industrial levels)." *Id.* Note that CO2 levels in 1982 averaged 340 parts per million, and last year in May 2019 concentrations surpassed 415 parts per million for the first time in three million years. *CO2 Concentrations Hit Highest Levels in 3 Million Years*, Yale Environment 360, https://e360.yale.edu/digest/co2-concentrations-hit-highest-levels-in-3-million-years.

29 Shell predicted global warming would "disintegrat[e]" the Antarctic Ice Sheet and "warned of the 'disappearance of specific ecosystems or habitat destruction,' predicted an increase in 'runoff, destructive floods, and inundation of low-lying farmland,' and said that 'new sources of freshwater would be required' to compensate for changes in precipitation. Global changes in air temperature would also 'drastically change the way people live and work.'" Franta, *supra* note 28. Exxon also predicted "that the American Midwest and other parts of the world could become desert-like" but dismissed these concerns as they were not comparable to the significance of "a nuclear holocaust or world famine." *Id.*

30 Big corporations have the resource to invest in and conduct research and development. These findings are private. However, the research in 1980 revealed dangers of petroleum production that were previously unforeseen. Exxon and Shell did not have a legal obligation to disclose the research results. This does not mean they cannot be criticized for concealing and obscuring information that would raise alarm and affect profitability. In fact, Exxon scientists have been contributing to peer-reviewed climate research and participated in the United Nations Intergovernmental Panel on Climate Change since 1988.

actively prevented governments from enacting clean-energy policies."[31] It was the *Exxon Valdez* spill that shed light on the devastating consequences of an oil spill, necessitating laws regulating the oil and gas industry first in the United States in the 1990s.[32]

B. Shareholders Defining Corporate Goals

Even though the *Exxon Valdez* disaster sparked the initial concerns and ensuing laws in the U.S., European corporations were the first to take a proactive stance and issue internal measures to establish "social legitimacy" of their oil business.[33] In the mid-1990s, Shell was involved in major international controversies[34] necessitating publicity of a better social and environmental image.[35] Its regional competitor, BP similarly campaigned for a greener profile.[36] Both companies were pressured by their (European) stockholders who demanded change.[37] In the U.S., despite Exxon showing support for new regulation in light of the oil spill,[38] neither Exxon nor Chevron participated in the early years of corporate rebranding to promote green energy since their shareholders were preoccupied with cost-

See Dana Nuccitelli, *Two-Faced Exxon: The Misinformation Campaign Against Its Own Scientists*, GUARDIAN (Nov. 25, 2015, 6:00 AM), https://www.theguardian.com/environment/climate-consensus-97-per-cent/2015/nov/25/two-faced-exxon-the-misinformation-campaign-against-its-own-scientists. This level of involvement renders dishonesty and publications made in bad faith almost criminal. The gravity of the results, the global consequences of the greenhouse effect warrant criticism and inquiry into Exxon and Shell's actions. For a chronicle of events regarding Exxon's deception, see *How Extreme Weather is Shrinking the Planet*, Bill McKibben (2018), https://www.newyorker.com/magazine/2018/11/26/how-extreme-weather-is-shrinking-the-planet.

31 Franta, *supra* note 28. Blaming or disparaging the oil corporations will not facilitate cooperation required to enact robust regulations. But one cannot overlook these deliberate corporate decisions that have thwarted clean-energy policies. Acknowledgement of dishonesty will urge global governments to hold wrongdoers accountable and compel the petroleum industry to ethically cooperate for effective legal change.

32 Note that climate change is a "spill" into the atmosphere. Thus, the parallels and negative externalities associated with oil spills need to be understood in order to regulate the industry.

33 Kolk & Levy, *supra* note 23, at 504.

34 Shell was embroiled in controversy in 1993 when a Nigerian activist was arrested and executed by the military for protesting Shell's pollution and exploitation of local people, and again in 1995 when Greenpeace campaigned to prevent Shell from decommissioning the Brent Spar platform in the North Sea instead of cleaning and recycling it. Andy Rowell, *Ghost of Brent Spar Haunts Shell*, OIL CHANGE INT'L (Feb. 3, 2015), http://priceofoil.org/2015/02/03/ghost-brent-spar-haunts-shell/.

35 Kolk & Levy, *supra* note 23, at 504.

36 *Id.*

37 *Id*.

38 "For the two decades following the Exxon Valdez disaster, the company worked quietly to safeguard its operations and infrastructure against steadily rising sea levels and thawing permafrost. Yet in public, it vociferously fought regulations and policies that would have limited fossil fuel emissions while publicly questioning the science behind climate change." Grandoni et al., *supra* note 24.

effectiveness and productivity.[39] Today, Shell and BP stockholders continue to influence decisions to help meet climate goals.[40] On the other hand, American counterparts Exxon and Chevron have resisted renewable energy alternatives and focused on profit-maximizing goals to advance fossil fuel efficiency.[41]

In recent years, the prevalence of media and its effect on company branding has induced investors to seek and promote eco-friendly alternatives. Faster dissemination of information means that the market reacts differently today than it did three decades ago.[42] For example, the *Deepwater Horizon* oil spill of 2010 in the Gulf of Mexico debilitated BP's business and corporate image, and had a lasting effect on the company—

39 Exxon shareholders were preoccupied with dealing with cost of the Exxon Valdez spill. Exxon shareholders rejected proposals to do more to protect the environment, with one shareholder noting that "[Elizabeth Holtzman] is still not persuaded that Exxon understands that its image and potential liability as a polluter could seriously affect the value of its stock." John A. Bolt, *Exxon Shareholders Overwhelmingly Reject Environmental Proposal*s, AP NEWS (Apr. 26, 1990), https://apnews.com/fc58470d6e81ead01f89be50a6c772c7.

40 European companies "have been responding to the concerns of investors and other constituents with commitments to reduce their emissions or make investments in other environmentally friendly technology." Reed, *supra* note 3. For example, Repsol (a global oil company based in Spain) pledged investments in renewable electricity and reforestation to achieve zero emissions by 2050; Equinor (Norwegian company) also pledged near zero emissions by 2050 in its oil and gas fields; BP has initiated recycling of PET plastics found in single-use drink bottles and packaging. *Id.*

41 "Both oil giants have been working with shareholders in recent years to try to define a path toward meeting the goals of the 2015 Paris climate agreement to limit global warming. U.S. rivals Exxon Mobil and Chevron are also under pressure from investors, but have so far not committed to any targets." Ron Bousso, *BP Faces Climate Protests at Investor Meeting, Shell Gets Boost*, REUTERS (May 21, 2019, 5:39 AM), https://www.reuters.com/article/us-bp-agm-protests/bp-faces-climate-protests-at-investor-meeting-shell-gets-boost-idUSKCN1SR10X. Exxon and Chevron find renewables to be unprofitable and instead focus on reducing greenhouse gas emissions, improving energy efficiency, investing in carbon capture and sequestration, and R&D to be able to excel in the oil and gas business. *See* Matthias J. Pickl, *The Renewable Energy Strategies Of Oil Majors – From Oil To Energy?*, 26 ENERGY STRATEGY REVS. 1, 3 (2019), https://www.sciencedirect.com/science/article/pii/S2211467X19300574.

42 "In this era of Twitter, Instagram, and the 24-hour news cycle, dramatic disasters take on a life of their own. There's a multiplier effect as images and headlines splash across the Internet at lightning speed, instantly converted into memes and reductionist status updates. This is arguably why BP suffered a much harsher share-price drop after Macondo than ExxonMobil did after *Valdez*, even though BP ultimately handled the aftermath of its spill much better." Sara Murphy, *25 Years on From Exxon Valdez: What We've Learned, What We've Ignored*, MOTLEY FOOL (Mar. 24, 2014, 4:30 PM), https://www.fool.com/investing/general/2014/03/24/25-years-on-from-exxon-valdez-what-weve-learned-wh.aspx. "The *Valdez* crashed on March 24, 1989. In the first two weeks after the crash, shares of Exxon lost 3.9% (vs. S&P up 2.8%), and after four weeks, they recouped all their losses (vs. S&P 500 up 7.1%). By contrast, the market reaction in BP shares has been far more swift and severe. In the seven trading sessions since the explosion of Transocean's *Deepwater Horizon*, BP shares have lost 13.1%. One of the intangible factors that may explain the disparity in market reactions is the fact that there is simply more day-to-day 'headline risk' than 20 years ago, a function of the dramatically accelerated flow of information in the market." *Id.*

unlike the *Exxon Valdez* incident.[43] BP's stock value has had an exponentially more difficult time trying to recoup its value ever since.[44] Following this incident, BP revamped its internal business structure and its shattered public image by diversifying its projects in hope of boosting investor confidence.[45] The *Deepwater Horizon* disaster shook the oil giant, and forced it to consider environmental and ecological concerns in the years to follow.

Still today, shareholders in Europe play a more active role in defining corporate goals, and strive to maintain sincerity towards global warming concerns.[46] European oil companies have confirmed plans in place to meet the Paris Agreement's goals to limit the increase in global average temperature to 1.5 degrees Celsius above pre-industrial levels by reducing greenhouse gas emissions to zero in the twenty-first century.[47] Meanwhile,

---

43 The *Deepwater Horizon* oil spill, also known as the *Gulf of Mexico* oil spill which occurred in 2010 remains the largest oil spill in history. For an in-depth explanation, see Richard Pallardy, *Deepwater Horizon Oil Spill*, BRITANNICA (Apr. 13, 2021), https://www.britannica.com/event/Deepwater-Horizon-oil-spill.

44 "The company's so-called "Macondo Payments" (named for the Gulf of Mexico offshore oilfield where the accident happened) have not alleviated the larger balance-sheet problems that persist for the U.K.-based company. Despite paying off billions of dollars of spill-related liability, BOP still maintains nearly $77.5 billion in debt -- much of that still largely driven by the disaster." Kevin Curran, *BP Is Winding Down Its Deepwater Horizon Debts but Markets Remain Wary*, STREET (Feb. 13, 2019, 11:08 AM), https://www.thestreet.com/investing/stocks/breaking-down-bp-s-big-debt-14865549. "BP has sold off $75 billion of assets to cover unprecedented government fines, private damage claims and legal bills. It has retooled facilities, ousted two top executives and been lucky with the ups and downs of oil prices." Steven Mufson, *The Oil Giant that Was 'Forced to Shrink to Greatness'*, WASH. POST (July 13, 2018, 5:32 PM), https://www.washingtonpost.com/business/economy/the-oil-giant-that-was-forced-to-shrink-to-greatness/2018/07/13/1be775e0-8159-11e8-b9a5-7e1c013f8c33_story.html.

45 *Id.* "Now it is once again investing profitably in massive oil and natural gas projects, including a Caspian gas pipeline, wells offshore Egypt and the fracturing of shale oil rock formations in Louisiana." Steven Mufson, *After the Deepwater Horizon Disaster, a New BP Emerges*, ANCHORAGE DAILY NEWS (July 16, 2018), https://www.adn.com/business-economy/energy/2018/07/16/after-deepwater-horizon-a-new-bp-emerges/.

46 BP and Shell have continued environmentally friendly marketing and investment in renewable energy since the 1990s. "Shell announced a $300m fund for 'investing in natural ecosystem' over the next three years. . . . The fund sounds big, and it is—until you compare it with Shell's annual income of $24bn. Shell's transition towards a low-carbon future is almost invisible in its annual report. Renewable energy doesn't figure in its summary of financial results." George Mobiot, *Shell Is Not A Green Saviour. It's A Planetary Death Machine*, GUARDIAN (June 26, 2019, 1:00 AM), https://www.theguardian.com/commentisfree/2019/jun/26/shell-not-green-saviour-death-machine-greenwash-oil-gas.

47 "Some oil and gas companies are already leagues ahead in planning to align with Paris goals and thrive in a low carbon economy. Shell has announced Scope 3 greenhouse gas intensity reduction goals. Total has invested substantially in solar energy and is reducing the carbon intensity of its energy products. Equinor rebranded itself from 'StatOil' and is diversifying into wind and solar energy development. Orsted, previously a Danish oil and gas company, sold its oil and gas portfolio." Press Release, As You Sow, Shareholders Strongly Support Climate Resolutions at Exxon and Chevron Annual Meetings (May 29, 2019), https://www.asyousow.org/press-releases/exxon-chevron-shareholder-climate-resolutions.

Exxon and Chevron shareholders have only recently voiced their climate concerns, but with little success.[48] In both 2019 and 2020, Exxon and Chevron shareholders sought resolutions "assessing the public health risks of expanding petrochemical operations in areas increasingly prone to climate change-induced storms, flooding, and sea level rise."[49] In May 2020, 46% shareholders at Chevron and 25% at Exxon voted in favor of their respective resolutions on the public health risks associated with expanding the petrochemical business.[50] Despite the votes, Chevron published yet another greenwashed "Climate Lobbying Report,"[51] which was soon rejected by its own stockholders.[52] In December 2020, Exxon finally announced a five year plan with "input from shareholders" after consistent underperformance of the stock during the pandemic.[53]

48 "Exxon Mobil Corp. and Chevron Corp. have once again sidestepped most shareholder-led efforts to bring the U.S. oil and gas supermajors closer in line with the goals of the Paris Agreement on climate change, according to the results of the companies' respective annual general meetings held May 27." Jodi Shafto, *Chevron Shareholders Pass One ESG Proposal; Exxon Votes Down Resolutions*, S&P GLOB. (May 28, 2020), https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/chevron-shareholders-pass-one-esg-proposal-exxon-votes-down-resolutions-58808569; *see* Press Release, As You Sow, Shareholders Raise Alarm: Petrochemical Investments Are a Risky Bet (May 27, 2020), https://www.asyousow.org/press-releases/2020/5/27/shareholders-raise-alarm-chevron-exxon-climate-change ("*As You Sow* has sought information as to whether the companies have any future plans to reduce their full carbon footprints, filing shareholder resolutions on the topic of Paris alignment with Exxon and Chevron; rather than respond, both companies have denied shareholders the right to vote on this critical issue by challenging the proposals at the U.S. Securities and Exchange Commission.").

49 Shareholders Strongly Support Climate Resolutions at Exxon and Chevron Annual Meetings, *supra* note 47.

50 Shareholders Raise Alarm: Petrochemical Investments Are a Risky Bet, *supra* note 48.

51 Chevron Corp., *Chevron 2020 Climate Lobbying Report* (2020), https://www.chevron.com/-/media/chevron/sustainability/documents/chevron-climate-lobbying-report.pdf.

52 *See Chevron Fails Shareholders with its Climate Lobbying Report, Needs to Go Back to Drawing Board*, UNION OF CONCERNED SCIENTISTS (Feb. 3, 2021), https://www.ucsusa.org/about/news/chevron-fails-shareholders-its-climate-lobbying-report-needs-go-back-drawing-board.

53 Eric Rosenbaum, *Oil Giant Exxon Mobil Pushes New Climate Change Plan as Activist Investors Circle*, CNBC (Dec. 14, 2020, 4:28 PM), https://www.cnbc.com/2020/12/14/exxon-mobil-begins-to-mount-defense-of-itself-and-a-bigas-activists-circle.html.

C. Public Opinion and Social Media Stimulating Change

While public awareness of the looming risks of global warming can advance lawmaking, the public's responsiveness has been obstructed by deeply polarized views on climate change. Social media has aided pro-environment activism [54] and given rise to the recent children's movement.[55] 2019 *Time*'s Person of the Year, high school student Greta Thunberg, sailed across the Atlantic for the UN Climate Change Conference, where she advocated for the youth, imploring the world's governments to take climate seriously.[56] A catalytic leader for climate change, she roused millions of people worldwide to protest political apathy towards global warming.[57] However, social media can also be counterproductive to the climate cause.[58] Public opinion seems to be deeply polarized around political lines.[59] Despite the rise of conservative politics in the U.S. and Europe shrouding climate concerns, majority populations in both regions support clean energy, carbon

54 *See, e.g.*, Shannon Dosenmagen, *Can Social Media Help To Save The Environment?*, WORLD ECON. F. (Apr. 7, 2016), https://www.weforum.org/agenda/2016/04/can-social-media-help-to-save-the-environment ("Greenpeace targeted Shell Oil operations in the Arctic Circle, but used media such as this YouTube video to indirectly influence Shell partners, including Lego. Applying highly visible, public pressure to call for specific environmental changes has increasingly become a tactic of the environmental movement.").

55 *See* Stephen Moss, *How Social Media Is Inspiring Children to Save The Natural World*, GUARDIAN (Jan. 25, 2019, 12:28 PM), https://www.theguardian.com/environment/2019/jan/25/social-media-inspiring-children-to-save-natural-world.

56 At the age of 16, Greta Thunberg sailed across the Atlantic to take the world stage at the UN Climate Summit 2019, imploring the world's governments to take climate change seriously. She plead, "I shouldn't be up here. I should be back in school on the other side of the ocean. . . . You have stolen my dreams and my childhood with your empty words. Yet, I am one of the lucky ones. People are suffering." *Transcript: Greta Thunberg's Speech at the U.N. Climate Action Summit*, NPR (Sept. 23, 2019, 1:58 PM), https://www.npr.org/2019/09/23/763452863/transcript-greta-thunbergs-speech-at-the-u-n-climate-action-summit. She has inspired younger populations to engage in climate demonstrations and online activism. *See* Charlie Wood, *The UK Media Regulator Says a 'Greta Thunberg Effect' Means More Children Are Engaging in Online Activism*, BUS. INSIDER (Feb. 4, 2020, 10:35 AM), https://www.businessinsider.com/greta-thunberg-effect-uk-children-online-activism-spikes-2020-2.

57 Wood, *supra* note 56; *see* Denise Chow, *Climate Scientists Say Greta Thunberg's Efforts Are Building Real Momentum*, MACH (Sept. 28, 2019, 5:17 AM), https://www.nbcnews.com/mach/science/climate-scientists-say-greta-thunberg-s-efforts-are-building-real-ncna1059321.

58 "One of the tensions present in receiving this type of support (known as 'clicktivism') is that it is difficult to ascertain the long-term involvement and depth of engagement of people who are readily clicking on links to support messages." Dosenmagen, *supra* note 54. "Since people now look to their social media streams as primary sources of news and information, this type of independent vocalization can be both positive (encouraging alternative streams of information) and problematic when information isn't verified or trustworthy." *Id.* "Social media currently acts as a driver of polarization, as algorithms encourage the creation of echo chambers that in turn affect environmental journalism." Isobel Gladston & Trevelyan Wing, *Social Media and Public Polarization over Climate Change in the United States*, CLIMATE INST. (Aug. 27, 2019), http://climate.org/social-media-and-public-polarization-over-climate-change-in-the-united-states/.

59 *Infra* note 73.

taxes and consider global warming as a key component in deciding their leaders.[60] Local and state governments are also recognizing the need for financial padding to face imminent environment disasters, including hurricanes and wildfires. In the U.S., even the more conservative states are requesting billions of dollars in federal funding to confront "changing coastal conditions" and "destabilizing effects and unpredictability" of severe storms.[61] The grave economic consequences of climate change are palpable. As today's younger generations become tomorrow's voice of reason, climate will invariably shape public views, political leadership and legislative agendas.

D. The Proliferation of Climate Propaganda

Exxon has engaged in a climate disinformation campaign since the 1980s.[62] Recently it was served with a lawsuit by the state of New York declaring "ExxonMobil knew the risks of climate change and defrauded its investors by misrepresenting them."[63] News headlines read, "100% global warming consensus in Exxon scientists' research contrasted its $31m campaign to cast doubt on that consensus."[64] In the past two decades, Exxon spent a whopping $36 million to fund climate dissenters.[65] After the Union of Concerned Scientists revealed Exxon spent $16 million from "1998 and 2005 to fund a network of more than 40 think tanks and advocacy groups to manufacture doubt about climate science under the guise of being neutral, independent analysts," Exxon promised to end such contributions in its 2007 Corporate Citizenship Report.[66] Yet, while discontinuing donations to "some high-profile grantees," it continued funding anti-climate rhetoric,

---

60 "Nearly 7 in 10 voters favor a carbon tax on fossil fuel companies where the revenue would be used to reduce other taxes, such as on income." Editorial, *On Climate Change, American Voters Sound More Like Team Greta Than Team Donald Trump*, USA TODAY (Jan. 24, 2020, 3:02 PM), https://www.usatoday.com/story/opinion/todaysdebate/2020/01/23/donald-trump-greta-thunberg-voters-lean-toward-climate-editorials-debates/4541311002/. "More than 6 out of 10 registered voters said they'd support a president who declares global warming a national emergency." *Id.*

61 *See* Christopher Flavelle, *Conservative States Seek Billions to Brace for Disaster. (Just Don't Call It Climate Change.)*, N.Y. TIMES (Jan. 20, 2020), https://www.nytimes.com/2020/01/20/climate/climate-change-funding-states.html. Texas is in line for more than $4 billion, the most of any state. The next largest sums go to Louisiana ($1.2 billion), Florida ($633 million), North Carolina ($168 million) and South Carolina ($158 million), all of which voted Republican in the 2016 presidential election. *Id.*

62 Lieberman & Rust*, supra* note 23.

63 Charles Pierce, *The Oil Giants Might Finally Pay for Pulling the Biggest Hoax of All* (2019), https://www.esquire.com/news-politics/politics/a28636123/exxonmobil-lawsuit-climage-change-new-york/.

64 Nuccitelli, *supra* note 30.

65 Negin, *supra* note 23.

66 *Id.*

spending a total of $23 million by 2007 and another $13 million in the following decade.[67] In 2017, ninety percent of Exxon's donations went to the U.S. Chamber of Commerce "despite the lobby group's history of misrepresenting climate science and the economics of transitioning to clean energy."[68] By having dissenters circulate false narratives, Exxon prevented its shareholders from fully appreciating the importance of our changing climate and cleaner energy sources. These narrative are often recirculated by fringe conservative groups on social media to deny climate change and mix politics into science.[69] Note that Shell scientists in Europe also knew the link between global warming, fossil fuel consumption and weather abnormalities.[70] While in the U.S. Exxon engaged in disinformation, the European oil and gas industry acknowledged the future of climate change and pursued renewable energy sources as alternative investments.[71]

E. Energy Legislation & Environment Policies in Europe and U.S.

The path towards environmental regulation and legislation varied between the U.S. and Europe. The 1997 Kyoto Protocol, an international treaty on climate change geared towards reducing global greenhouse gas emissions, was the catalyst for change.[72] European corporations BP and Shell voluntarily engaged in active political discussion to reduce their carbon footprint and the undesirable effects of the rising global temperatures.[73] The Lisbon Treaty signed in 2007 reaffirmed energy policy as a shared goal between the EU and its Member States.[74] Due to climate change concerns, the European Market adopted binding legislation in 2008 to meet climate targets for 2020, later amended for 2030.[75]

---

67 *Id.*

68 *Id.* I will note that while lobbying itself is not an evidence of transgression, the duplicitous nature of Exxon's green marketing does however juxtapose its investments made to climate change dissenters.

69 *See* Damian Carrington, *Climate Denial Ads on Facebook Seen by Millions, Report Finds*, GUARDIAN (Oct. 8, 2020, 12:01 AM), https://www.theguardian.com/environment/2020/oct/08/climate-denial-ads-on-facebook-seen-by-millions-report-finds.

70 Franta, *supra* note 28.

71 Reed, *supra* note 3.

72 *See Kyoto Protocol*, BRITANNICA, https://www.britannica.com/event/Kyoto-Protocol (last visited May 18, 2021). Note that forty-one countries and the European Union were part of this commitment, not including the U.S. *Id*.

73 See BP's and Shell's "participatory" and "preemptive" route described in Kolk & Levy, *supra* note 23.

74 "However, it maintained each Member's right to choose its energy sources, determine the conditions for exploiting them and establish the general structure of its energy supply." *Europe's Energy History, A Series of Fits and Starts*, PLANETE ENERGIES (Feb. 22, 2016), https://www.planete-energies.com/en/medias/close/europe-s-energy-history-series-fits-and-starts.

75 *Id.*

By 2005 the European Union developed the world's largest greenhouse gas legislative framework—the EU Emissions Trading System ("ETS"). This is a comprehensive cap-and-trade system, which sets quantitative limits for emissions by firms within its scope, and allows greenhouse gas emitting companies to trade emission quotas all over the EU in efforts to reach emission reduction targets to slow global warming.[76] "Participation in ETS is a legal obligation under EU law for emitters in member states."[77] Though its effectiveness has been debated,[78] ETS has led to a definite reduction in industrial carbon emissions without hurting economic performance of thousands of factories, power stations, and other installations.[79] Critics of the ETS propose that a carbon tax plan would be a better alternative to maintain revenues during times of financial crises.[80] In fact, many European countries including Denmark, Finland, Germany, Ireland, Italy, the Netherlands, Norway, Slovenia, Sweden, Switzerland, and the UK have initiated carbon taxes since the 1990s, often as a means to relieve the income tax burden.[81]

Energy legislation in the U.S. took a different path. In response to the *Exxon Valdez* spill in 1990, the American government passed the Oil

76 See the ETS handbook for an in-depth explanation. EUR. UNION, EU ETS HANDBOOK (2015), https://ec.europa.eu/clima/sites/clima/files/docs/ets_handbook_en.pdf. "The creation of a CO2 emissions trading system (ETS) in the European Union has created a more complex regulatory environment, in which unilateral carbon-energy taxation and EU minimum energy tax rates now coexist with trading of mainly grandfathered emission certificates for carbon." Mikael Skou Andersen & Gaëll Mainguy, *Europe's Experience with Carbon-Energy Taxation*, 3 SURVS. & PERSPS. INTEGRATING ENV'T & SOC'Y 1, 8 (2010).

77 *Id.*

78 "Among the key conclusions is that the lack of flexibility in the structure of the EU ETS cap, and its inability to adjust to radically altered wider economic conditions in the shape of the financial crisis, threatens to undermine its efficacy in providing incentives for abatement." Tim Laing, Misato Sato, Michael Grubb & Claudia Comberti, *Assessing the Effectiveness of the EU Emissions Trading Scheme* (Ctr. for Climate Change Econ. & Pol'y, Working Paper No. 126, Grantham Rsch. Inst. on Climate Change & Env't, Working Paper No. 106, 2013), http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2014/02/WP106-effectiveness-eu-emissions-trading-system.pdf.

79 Mirabelle Muûls, Jonathan Colmer, Ralf Martin & Ulrich J. Wagner, *Evaluating the EU Emissions Trading System: Take It or Leave It? An Assessment of The Data After Ten Years* (Grantham Inst., Briefing Paper No. 21, 2016), https://www.imperial.ac.uk/media/imperial-college/grantham-institute/public/publications/briefing-papers/Evaluating-the-EU-emissions-trading-system_Grantham-BP-21_web.pdf.

80 Andersen & Mainguy, *supra* note 76; *see* Muûls et al., *supra* note 79 ("As an alternative policy, a carbon tax would provide more certainty and visibility for low-carbon business, therefore it should remain a potential tool for policymakers.").

81 "Finland (1990), Sweden (1990), Norway (1991) and Denmark (1992) have been frontrunners in launching specific CO2-taxes to curb CO2 emissions . . . . towards the close of the 1990s two of the largest EU economies, Germany (1998) and UK (2000) introduced carbon-energy taxation policies . . . . While UK introduced a specific climate change levy on fossil fuels, Germany increased more broadly its energy taxes as part of a so-called 'ecological tax reform.'" Andersen & Mainguy, *supra* note 76, at 2.

Pollution Act, empowering the Environmental Protection Agency ("EPA") to enact measures to prevent and respond to future oil spills.[82] This was a reactive measure for emergency situations, without reference to climate change. In 1997, the U.S. declined to ratify the Kyoto Protocol that sought reduction in greenhouse gas emissions by industrialized countries.[83] The U.S. under President Donald Trump similarly declined to ratify the Paris Agreement (or "Paris Accord," successor to the Kyoto Protocol).[84] The Kyoto Protocol and the Paris Agreement, signed and ratified by European countries years ahead of the U.S., function as points of deviation between the two regions. This divergence continues as immense demand for petroleum coupled with America's refusal to reduce greenhouse gas emissions without developing countries' participation resulted in American businesses and national policies opposing international cooperation and commitments.[85] The U.S. especially opposed the binding nature of international agreements, and desired freedom to burn energy to meet its needs. In addition to disfavoring international efforts, from 2017 to 2021 the Trump administration went as far as to roll back existing environmental regulations. This made it easier for companies to pollute by easing the

82 "In 1990, Congress passes the Oil Pollution Act for offshore accidents, which creates a three-tiered emergency response plan for spills, caps liability for operators of offshore facilities, and establishes a trust fund that makes up to $1 billion available for each spill incident." *Oil Dependence and U.S. Foreign Policy*, COUNCIL ON FOREIGN RELS., https://www.cfr.org/timeline/oil-dependence-and-us-foreign-policy (last visited May 19, 2021).

83 U.S. President Clinton signed the Kyoto Protocol, but the U.S. Senate refused to ratify the treaty. Even though economic harm and energy shortages were some of the reasons provided, the U.S. Senate subsequently passed a resolution refusing such treaties unless they also extended to developing countries. In 2001, President Bush completely withdrew the country from the Kyoto Protocol, which became effective in 2005. In declining to ratify the Kyoto Protocol, President George W. Bush said, "The Kyoto Treaty would affect our economy in a negative way," Bush said during his 2000 presidential campaign. Riley Beggin, *The Last Time A US President Dumped A Global Climate Deal*, ABC NEWS (June 1, 2017, 3:42 PM), https://abcnews.go.com/Politics/time-us-president-dumped-global-climate-deal/story?id=47771005. "We do not know how much our climate could or will change in the future. We do not know how fast change will occur, or even how some of our actions could impact it." *Id.* In 2010, leaked U.S. communications shed light of U.S.'s efforts to fake engagement in UN climate negotiation. After the unsuccessful Copenhagen Accord of 2009, in 2016 U.S. President Obama signed the Paris Agreement on Climate Change which also sought to reduce greenhouse gas emissions and aid developing countries on their way to industrialization. Though it appeared successful, the emission targets were nationally determined, and the rules rather weak. Unfortunately, in 2017, President Trump withdrew from the Paris Agreement. *See*, *A Brief History of the United States and the UN Climate Change Negotiations*, WORLD AT 1°C (June 2, 2017), https://worldat1c.org/a-brief-history-of-the-united-states-and-the-un-climate-change-negotiations-bf7525d4ef13.

84 Up until January 2021, when newly elected President Joseph Biden did recommit the US to the Paris Agreement. Coral Davenport & Lisa Friedman, *Biden Cancels Keystone XL Pipeline and Rejoins Paris Climate Agreement*, N.Y. TIMES (Feb. 19, 2021), https://www.nytimes.com/2021/01/20/climate/biden-paris-climate-agreement.html.

85 Even a decade after the Kyoto Protocol, "U.S. policy on oil consumption remains focused on energy security and air quality." Oil Dependence and U.S. Foreign Policy, *supra* note 82.

economic burden associated with emission management.[86] With no legal or regulatory guidance since the 1990s, Exxon, Chevron and other American energy companies were free to focus on internal efforts to improve company performance.[87]

F. Other Factors Affecting Energy Policies in both Regions

Up until 2019, the U.S. had always been a net oil importer.[88] To achieve energy independence, the U.S. federal government promoted oil and gas exploration in the Arabian Gulf and other regions by excusing oil companies from paying royalties on the oil drilled[89] and offering government guarantees to encourage development of more oil and gas reserves.[90] A government report estimates that companies like Shell, BP, Exxon and Chevron have avoided paying at least $18 billion in royalties in oil and gas drilled since 1996.[91] National policies to sponsor U.S. oil production in the Middle East intertwined national and corporate interests. This explains the dearth of environment-friendly regulation today. In 2005, when the U.S. federal government began to support renewable resources by passing the

86 "In its rollback proposals, the Trump administration argued that each ton of carbon dioxide emitted by a car or a coal plant in 2020 would only cause around $1 to $7 in economic damages. That's far lower than the Obama administration's central estimate . . . roughly $50 in total damages." Brad Plumer, *Trump Put a Low Cost on Carbon Emissions. Here's Why It Matters*, N.Y. TIMES (Aug. 23, 2018), https://www.nytimes.com/2018/08/23/climate/social-cost-carbon.html.

87 Joseph A. Pratt, *Exxon and the Control of Oil*, 99 J. AM. HIST. 145, 152–53 (2012).

88 *See The United States Was Energy Independent in 2019 for the First Time Since 1957*, INST. ENERGY RSCH. (May 11, 2020), https://www.instituteforenergyresearch.org/fossil-fuels/gas-and-oil/the-united-states-was-energy-independent-in-2019-for-the-first-time-since-1957.

89 "But back in the late 1990s — when the country was heavily reliant on oil imports — the federal government wanted to boost American energy independence by encouraging more exploration in the Gulf. And since oil prices were low, Washington tried to make it worthwhile for oil companies by offering a brief reprieve on the royalties." Hiroko Tabuchi, *Government Loophole Gave Oil Companies $18 Billion Windfall*, N.Y. TIMES (Oct. 25, 2019), https://www.nytimes.com/2019/10/24/climate/oil-lost-revenue-gao.html.

90 "In Russia in the 1990s Exxon confronted a nation in flux, with no clear legal or regulatory framework and great uncertainty about its political future. The company responded by demanding explicit government guarantees in its contract to develop giant oil and gas reserves on Sakhalin Island, off the nation's eastern coast." Pratt, *supra* note 87, at 152.

91 *Offshore Oil and Gas: Opportunities Exist to Better Ensure a Fair Return on Federal Resources*, GOV'T ACCOUNTABILITY OFF. (Oct. 24, 2019), https://www.gao.gov/products/GAO-19-531.

Energy Policy Act,[92] it acknowledged its "addiction" to oil and criticized its own investment of "billions in federal subsidies to the oil industry."[93]

Global oil markets have also influenced the U.S. and European fossil fuel industries. At the turn of the century, economic crises in Asian countries led to a depressed oil market, which was followed by massive mergers in the industry—BP and Amoco (in 1998, the largest foreign takeover of a U.S. company), Exxon and Mobil (also in 1998 creating ExxonMobil), and Texaco and Chevron (in 2000).[94] This fortified the petroleum monopoly. Note that in 2020, pandemic-hit Exxon and Chevron engaged in historic discussions of a potential mega-merger, although this seems less likely as the depressed oil markets rise back up in 2021.[95]

G. The Role of Lawsuits & Legislation in the Growing Field of Environment Law

In both the U.S. and Europe, lawsuits against energy companies initiated by those affected by adverse effects of global warming have largely failed, deterring progress for environmental laws via litigation. Over the past decade, American judges have continuously sided with oil corporations on procedural grounds.[96] Without a direct accident at the hands of a corporation, it is impossible to impose liability—you simply cannot prove causation between petroleum production and extreme weather patterns resulting in damages to plaintiffs' properties. Fossil fuel companies need not bear the consequences for an "act of God."[97] Without federal legislation on the matter, claimants have no cause of action to sue under federal

92 "The Energy Policy Act of 2005 (EPAct) is the first major energy law enacted in more than a decade, and makes the most significant changes in Commission authority since the New Deal's Federal Power Act of 1935 and the Natural Gas Act of 1938 . . . it strengthened the Commission's regulatory tools, recognizing that effective regulation is necessary to protect the consumer from exploitation and assure fair competition . . . ." Fed. Energy Regul. Comm'n, *Energy Policy Act of 2005 Fact Sheet* (Aug. 8, 2006), https://cms.ferc.gov/sites/default/files/2020-04/epact-fact-sheet.pdf.

93 Oil Dependence and U.S. Foreign Policy, *supra* note 82.

94 Oil Dependence and U.S. Foreign Policy, *supra* note 82.

95 *See* Avi Salzman, *Exxon Mobil and Chevron Talked Merger Last Year. But the Logic Has Faded*, BARRON'S (Feb. 5, 2021, 8:03 PM), https://www.barrons.com/articles/the-logic-has-faded-for-an-exxon-mobile-megamerger-with-chevron-51612573430.

96 Leslie Hook, *Oil Majors Gear Up for Wave of Climate Change Liability Lawsuits*, FIN. TIMES (June 8, 2019), https://www.ft.com/content/d5fbeae4-869c-11e9-97ea-05ac2431f453 ("In several landmark cases over the past decade, judges sided with the oil companies, including one key ruling that corporations cannot be held liable for their greenhouse gas emissions in federal court."). For example, when the plaintiff, the Alaskan village of Kivalina, asked for cost of relocation, the court declared that the case could not be heard under federal common law. *Id.*

97 And even outside exculpatory clauses, how can any plaintiff assign fault for a hurricane or a flood?

common law. The oil and gas industry asserts that a courtroom is the wrong venue to fix global warming and its repercussions.[98] They believe that "[t]he fundamental flaw with these lawsuits is that the companies didn't do anything wrong . . . they are selling a useful product."[99] And they are right.

An overview of the key climate lawsuits in the U.S. highlights the difficulties of initiating and winning a lawsuit in the U.S.[100] Nonetheless, climate enthusiasts believe that the growing wave of litigation could turn the tide. *Massachusetts v. Environmental Protection Agency*, decided in 2007, was a win for the plaintiffs where the Supreme Court, in a 5–4 decision, forced the EPA to regulate carbon dioxide emissions under the

98 Shell & Exxon claimed, "We do not believe the courtroom is the right venue to address the global challenge of climate change." Hook, *supra* note 96.

99 This is a remark by Phil Goldberg, special counsel at the National Association of Manufacturers, a lobby group in DC whose members include fossil fuel companies. He believes "There has been a long history of this litigation that has not been successful, and for good reason." *Id.*

100 Here is an overview of the key cases: (1) in *Massachusetts v. EPA*, 549 U.S. 497 (2007), "the Supreme Court rules that carbon dioxide is a type of pollution that should be regulated by the EPA under the Clean Air Act. Previously carbon dioxide was not regulated at the federal level," Hook, *supra* note 96; (2) in *Native Village of Kivalina v. ExxonMobil Corp.*, 663 F. Supp. 2d 863 (N.D. Cal. 2009), the "Alaskan village of Kivalina files suit against ExxonMobil and other oil producers [in 2008], asking for monetary damages due to the flooding of the village. Kivalina's arguments are ultimately rejected by the courts," Hook, *supra* note 96; (3) in *Am. Elec. Power Co. v. Connecticut*, 564 U.S. 410 (2011), "The Supreme Court rules in AEP v Connecticut that power companies cannot be held liable for damages caused by their carbon dioxide emissions, because CO2 is regulated by the federal government," Hook, *supra* note 96; (4) in *Juliana v. United States*, 217 F. Supp. 3d 1224 (D. Or. 2016), "a group of teenagers sue the U.S. government for its lack of action on climate change, alleging that the U.S. 'climate system' is critical to their rights to life, liberty and property. The case is ongoing," Hook, *supra* note 96; (5) in *County of San Mateo v. Chevron Corp.*, 294 F. Supp. 3d 934 (N.D. Cal. 2018), "Three localities in California (San Mateo County, Marin County, and the city of Imperial Beach) file lawsuits against oil companies, charging them with nuisance and negligence under California state law due to the climate impact of their products," Hook, *supra* note 96; (6) in *City of Oakland v. BP P.L.C.*, 325 F. Supp. 3d 1017 (N.D. Cal. 2018), "San Francisco and Oakland file climate liability lawsuits against oil producers, seeking damages to cover the cost of dealing with rising sea levels and other climate impacts. These cases were tossed out in June 2018, but now that decision is under appeal," Hook, *supra* note 96; (7) in *City of New York v. BP P.L.C.*, 325 F. Supp. 3d 466 (S.D.N.Y. 2018), "New York City files a liability lawsuit against oil companies, claiming damages and seeking compensation for climate-related infrastructure spending. The case was thrown out, and the dismissal is under appeal," Hook, *supra* note 96; (8) in *Rhode Island v. Chevron Corp*., 393 F. Supp. 3d 142 (D.R.I. 2019), and *Mayor & City Council of Baltimore v. BP P.L.C*., 388 F. Supp. 3d 538 (D. Md. 2019), "Rhode Island and Baltimore file climate damages cases (separately) against fossil fuel companies, asking for damages to help pay for the harmful effects of climate change," Hook, *supra* note 96; (9) in *People of the State of New York v. Exxon Mobil Corp.*, see Docket of New York State Supreme Court Case, CLIMATE CASE CHART, http://climatecasechart.com/climate-change-litigation/case/people-v-exxon-mobil-corporation/ (last visited May 19, 2021), "New York attorney general files a fraud case against ExxonMobil, alleging it deceived investors over the risks that climate change regulations posed to its business," Hook, *supra* note 96; (10) in Brief for Amicus Curiae States of California et al. in Support of Plaintiff-Appellants, *City of Oakland v. BP P.L.C.* (2019) (No. 18-16663), "A group of 10 states including New York and California file a 'friend of the court' briefing in the climate liability cases brought by San Francisco and Oakland, as the cities appeal the dismissal of their lawsuits," Hook, *supra* note 96.

Clean Air Act.[101] "Environmental lawsuits have a long history, but climate liability and climate rights are a new frontier."[102] Furthermore, courts today know and acknowledge that greenhouse emissions are the cause of global warming.[103] Fortunately, the debate is shifting away from the validity of climate change, and the recent wave of litigation could clarify the disputed laws or even foster creation of new ones for future nuisance and injury claims against the petroleum industry.[104]

Though litigation has been used for decades to further environmental activism, the recent rise in lawsuits is bringing more claimants and new legal questions to the table. For example, local governments are filing public nuisance lawsuits on behalf of their constituents against fossil fuel corporations.[105] In 2018, Rhode Island sued fourteen oil and gas companies including Exxon, Chevron, BP, and Shell, fearing loss of its 400-mile long coastline from rising sea levels and related harms.[106] Fourteen American cities have similarly sued fossil fuel companies, many of which are in pretrial motions, where litigants are seeking relief for *future* harm.[107] Sadly,

101 *Massachusetts v. Environmental Protection Agency*, 549 U.S. 497 (2007), is a Supreme Court decision in which the Supreme Court deemed twelve states and several cities of the U.S. had standing to bring a lawsuit against the EPA to force it to regulate greenhouse gases as pollutants. *Id.* at 526. Chief Justice Roberts dissented, claiming that Massachusetts should not have had standing to sue because the potential injuries from global warming were not concrete or particularized. *See id.* at 1463 (Roberts, C.J., dissenting). Justice Scalia's dissent argued that the Clean Air Act was intended to combat conventional lower-atmosphere pollutants and not global climate change. *See id.* at 1471 (Scalia, J., dissenting).

102 Umair Irfan, *Pay Attention to the Growing Wave of Climate Change Lawsuits*, VOX (June 4, 2019, 11:13 AM), https://www.vox.com/energy-and-environment/2019/2/22/17140166/climate-change-lawsuit-exxon-juliana-liability-kids.

103 "Another interesting factor in these cases is that climate science itself isn't up for debate. The lawsuits center on some fundamental interpretations of law, but in nearly all cases, the parties agree on these facts: Greenhouse gases from burning fossil fuels are heating up the planet, which in turn is fueling sea level rise, more extreme weather, and changes in the overall climate. In San Francisco and Oakland's lawsuits against oil companies, for example, the presiding federal judge even asked for a climate change tutorial from the plaintiffs and the defendants. Both sides largely agreed on the fundamentals." *Id.*

104 In fact, courts will also consider the possibility that these lawsuits could open the floodgates to new litigation.

105 Nuisance is a claim that an activity or condition is indecent, offensive, or interferes with another person's reasonable use and enjoyment of life or property. Public nuisance lawsuits claim unreasonable, unwarranted, or unlawful interference with a right common to the general public. Examples of public harms include rising sea levels that are encroaching coastlines or risk of wildfires that may endanger homes other properties.

106 "[A]s warmer temperatures melt polar ice. That in turn is fueling larger storm surges, saltwater intrusion, erosion, and nuisance flooding. More carbon dioxide in the atmosphere is also making the ocean more acidic, threatening shellfish in the Narragansett Bay." *Id.*; *see* Complaint, Rhode Island v. Chevron Corp., No. PC-2018-4716, 2020 WL 4812764 (2020), http://www.riag.ri.gov/documents/KilmartinVChevronEtAl.pdf.

107 Irfan, *supra* note 102. For filed legal documents of the prominent climate change cases, see *Climate Damage and Deception*, SHER EDLING LLP, https://www.sheredling.com/climate-change-pr/ (last visited May 19, 2021).

climate lawsuits by two of the biggest cities, San Francisco and New York, have already been dismissed on the basis of improper venue.[108] In October 2020, in the case of Rhode Island v. Chevron Corp. et. al, the First Circuit remanded the case back to state court on procedural grounds. [109] The court stated that the companies' actions in connection with contracts with the federal government concerning oil and gas production did not have sufficient nexus with Rhode Island's allegations that the companies engaged in misleading marketing about the impacts of products they sold in the state.[110] Despite plaintiffs' difficulty in proving harm and causation, and despite the oil industry asserting that that courtroom is the wrong venue to fix global warming, the industry knows these lawsuits could have merit. In fact, Exxon has spent a million dollars for carbon tax legislation with clauses mandating immunity from climate change-related lawsuits.[111] They know that one win could usher a new age of plaintiff successes in climate litigation.[112] Corporations want to hedge this risk before encountering prohibitively expensive liabilities.

Fisheries and farmers are the newest plaintiffs suing petroleum companies for damages to the environment caused by climate change. In 2018, Pacific Coast Federation of Fisherman's Association sued 30 companies including Exxon, Chevron, BP and Shell, alleging global warming related damages to the Dungeness crab fishery.[113] Unlike lawsuits

108 Judges dismissed these cases claiming such matters are better dealt with by Congress or the executive branch. Alastair Bland, *Fishermen Sue Big Oil for Its Role in Climate Change*, NPR (Dec. 4, 2018, 8:02 AM), https://www.npr.org/sections/thesalt/2018/12/04/671996313/fishermen-sue-big-oil-for-its-role-in-climate-change.

109 The First Circuit issued its decision just weeks after the Supreme Court granted cert to review the issue of the scope of appellate review of remand orders in Baltimore's case against energy companies. State court proceedings in Rhode Island's case were put on hold pending the U.S. Supreme Court's and Rhode Island Supreme Court's consideration of personal jurisdiction issues. Procedural history and case documents relating to *Rhode Island v. Chevron Corp*. are available at *Rhode Island v. Chevron Corp.*, CLIMATE CASE CHART, http://climatecasechart.com/case/rhode-island-v-chevron-corp (last visited May 19, 2021).

110 *Id.*

111 Irfan, *supra* note 102. Exxon is also facing lawsuits from its own shareholders who feel they have been misinformed about the risks of climate change and future climate regulations. *Id.*

112 Trends already reveal that climate litigation is on the rise. The *Global Climate Litigation Report: 2020 Status Review* found that the number of climate case doubled from 2017 to 2020, pressurizing governments and corporations to pursue more ambitious climate change mitigation and adaptation goals. *Climate Litigation Spikes, Giving Courts An 'Essential Role' In Addressing Climate Crisis*, UN NEWS (Jan. 26, 2021), https://news.un.org/en/story/2021/01/1083032.

113 Complaint, Pacific Coast Fed'n of Fisherman's Ass'n v. Chevron Corp. (N.D. Cal. 2018) (No. 4:18-cv-07477), http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/case-documents/2018/20181114_docket-CGC-18-571285_complaint.pdf. This is a nuisance and negligence lawsuit. "The higher temperatures have caused blooms of toxic algae that, by producing the neurotoxin domoic acid, can make Dungeness crab and other shellfish unsafe to eat." Bland, *supra* note 108.

filed by cities, petitioners here cite tangible, present-day, direct and monetary harm. Richard Wiles, executive director of the Center for Climate Integrity, says "establishing a firm, highly defensible, essentially incontrovertible link between global warming and the damages that the plaintiff, or industry in question, has suffered" is the key to winning a lawsuit of this nature, and the science supporting it "appears very strong."[114] He also believes that this case could pave the way for a flood of lawsuits against the petroleum industry.[115] In conclusion, climate change lawsuits in the U.S. are rising, and their impending success is palpable to the fossil fuel industry.

III. THE PROBLEMS

A. Oil Companies Are Fighting Against Climate Change

In the late 1980s and 1990s, scientific consensus over global warming was gaining traction. In response, the fossil fuel industry formed the "Global Climate Coalition" to thwart further climate change regulations.[116] Many corporations (not just Exxon) fund climate skeptics[117] to shed doubt over climate change science and emphasize the dire economic consequences for consumers if climate regulations were enacted.[118] This allows them to increase their fossil fuel exploration and extraction to meet revenue targets and steady global demands.[119]

During the 1990s, the U.S. government supported the national petroleum industry to gain independence from foreign oil imports.[120] As such, in 2019

114 *Id.*

115 *Id.*

116 "Facing a growing environmental and political movement, a collection of energy companies, primarily from the coal sector, created the Global Climate Coalition to fight impending climate change regulations. The group approached the American Petroleum Institute for funding and support in the early 1990s." Lieberman & Rust, *supra* note 23. "[I]t distributed a video to hundreds of journalists, the White House and several Middle Eastern oil-producing countries suggesting that higher levels of carbon dioxide in the atmosphere were beneficial for crop production, and could be the solution to world hunger." *Id.*

117 Between 1998 and 2005, Exxon's foundation provided over $15 million to Frontiers of Freedom Institute and other climate denying organizations. *Id.*

118 *Id.*

119 "As many of the world's major oil companies — including Exxon, Mobil and Shell — joined a multimillion-dollar industry effort to stave off new regulations to address climate change, they were quietly safeguarding billion-dollar infrastructure projects from rising sea levels, warming temperatures and increasing storm severity." *Id.*

"From the North Sea to the Canadian Arctic, the companies were raising the decks of offshore platforms, protecting pipelines from increasing coastal erosion, and designing helipads, pipelines and roads in a warming and buckling Arctic." *Id.*

120 Tabuchi, *supra* note 89.

the U.S. finally became a net exporter of oil products and crude oil after seven decades, competing with OPEC[121] countries such as Saudi Arabia, Venezuela, and Iran.[122] Commentators and oil executives in the U.S. were dissatisfied by the Trump Administration's lack of support when many were left on the brink of bankruptcy.[123] They complained even though the Administration reduced requirements on oil and gas companies to monitor and mitigate releases of greenhouse gases amidst the pandemic,[124] and instituted petroleum-*friendly* regulations.[125] Notwithstanding Trump's "election-year reversal of his past promises to expand offshore production," it was mostly the smaller and newer American oil companies that experienced irreversible setbacks to business attributable to COVID-19, which worsened oil prices following depressed global demand. While the effect of the pandemic will continue to usher cutbacks and bankruptcies amongst smaller players, it does not take away from the fact that the U.S. government at the hands of Trump[126] and his predecessor Obama[127] did help achieve America's "net-exporter" status.

---

121 Organization of the Petroleum Exporting Countries. *See generally Brief History*, ORG. PETROLEUM EXPORTING COUNTRIES, https://www.opec.org/opec_web/en/about_us/24.htm (last visited May 19, 2021).

122 "President Donald Trump has touted American energy independence, saying that the nation is moving away from relying on foreign oil." Stephen Cunningham, *U.S. Posts First Month in 70 Years as a Net Petroleum Exporter*, BLOOMBERG (Nov. 29, 2019, 9:49 AM), https://www.bloomberg.com/news/articles/2019-11-29/u-s-posts-first-month-in-70-years-as-a-net-petroleum-exporter. "The U.S. return to being a net exporter serves to remind how the oil industry can deliver surprises -- in this case, the shale oil revolution - that upend global oil prices, production, and trade flows," said Bob McNally, a former energy adviser to President George W. Bush and president of the consulting firm Rapidan Energy Group. *Id.* For projected exports and graphical illustrations, see Albert Painter and Corrina Ricker, *The United States Is Projected to Be a Net Exporter of Crude Oil in Two AEO2020 Side Cases*, U.S. ENERGY INFO. ADMIN. (Feb. 12, 2020), https://www.eia.gov/todayinenergy/detail.php?id=42795.

123 Ben Lefebvre, *The Oil Industry Actually Hasn't Done that Well Under Trump*, POLITICO (Oct. 27, 2020, 4:30 AM), https://www.politico.com/news/2020/10/27/trump-oil-gas-industry-432722.

124 "The rollback . . . is a gift to many beleaguered oil and gas companies, which have seen profits collapse from the Covid-19 pandemic." Coral Davenport, *Trump Eliminates Major Methane Rule, Even as Leaks Are Worsening*, N.Y. TIMES (Apr. 28, 2021), https://www.nytimes.com/2020/08/13/climate/trump-methane.html.

125 *A Running List of How President Trump Is Changing Environmental Policy*, NAT'L GEO. (2019), https://www.nationalgeographic.com/news/2017/03/how-trump-is-changing-science-environment/.

126 "He's bragged about record energy production during rallies with oil-patch voters in states like Pennsylvania and Texas, while taking credit for an April deal between OPEC and Russia aimed at propping up fuel prices as the pandemic sent demand plummeting." Lefebvre, *supra* note 123.

127 In November 2018, then-President Obama said, "I was extraordinarily proud of the Paris Accords because, look I know we're in oil country and we need American energy. And by the way, American energy production, you wouldn't always know it, but it went up every year I was president. And you know that whole suddenly America's like the biggest oil producer . . . that was me, people."

A study using word count analysis of company annual reports, operational data, lobbying expenditures, and public company statements of BP, Exxon and Shell demonstrate that the largest oil companies are "backing up their increasingly 'green' rhetoric by moving their businesses in a direction that promotes sustainability."[128] Reality disagrees. The petroleum industry's expansion and exportation does not reflect a sustainable path.[129] Big Oil companies, capable of withstanding the economic impact of a few new regulations, purported to support the environment by opposing Trump-EPA's revocation of regulation on methane gas emissions from oil facilities.[130] Behind this façade, they lobby millions of dollars every year to fend off climate friendly regulations[131] and engage in business decisions that stand contrary to their alleged support of the Paris Agreement.[132] The fossil fuel industry is engaging in conflicting activity, and this emanates mixed signals about its true intentions. Releasing sustainability reports splashed in the color green is not enough. These corporations cannot express environmental concerns to the world to invite

---

Lori Robertson, *Obama's Misleading Oil Boast*, FACTCHECK.ORG (Nov. 30, 2018), https://www.factcheck.org/2018/11/obamas-misleading-oil-boast/. There were several factors that contributed to increased American oil production "including some that were Obama's doing." *Id.*

128 Word count analysis used terms such as *green*, *sustainable*, *renewable*, and *environmentally conscious*. According to the study, while BP and Shell (Europe) focused increasingly on diversifying into alternative greener energy sources and renewables, Exxon (U.S.) emphasized reduction of their carbon footprint. Dana Schweitzer, *Oil Companies and Sustainability: More than Just an Image?* (2010) (B.A. thesis), https://deepblue.lib.umich.edu/bitstream/handle/2027.42/77607/dschwei.pdf.

129 "The oil industry has a long history of working to slow efforts to combat climate change, with tactics including the spreading of false information about the science. Even today, as companies acknowledge the reality of global warming, their SEC filings list climate regulation as a potential threat." Justin Worland, *Oil Companies Say They're Going Green. Here's What that Would Mean for the Fight Against Climate Change*, TIME (Oct. 4, 2018, 2:20 PM), https://time.com/5415263/president-trump-oil-companies-carbon-capture-climate-change/.

130 "British Petroleum, ExxonMobil and Royal Dutch Shell voiced opposition to the plan but smaller oil and gas companies welcomed the possibility." Tom Krisher, *Politics Of Climate Change Put Corporations in Tough Spot*, PBS NEWS HOUR (Aug. 30, 2019, 9:33 AM), https://www.pbs.org/newshour/nation/politics-of-climate-change-put-corporations-in-tough-spot. Since Trump was elected President, the EPA has scaled back on its efforts to safeguard the environment drastically. *See* Nadja Popovich, Livia Albeck-Ripka & Kendra Pierre-Louis, *The Trump Administration is Reversing Nearly 100 Environmental Rules. Here's the Full List.*, N.Y. TIMES (Jan. 20, 2021), https://www.nytimes.com/interactive/2020/climate/trump-environment-rollbacks-list.html.

131 "Exxon, Mobil and Shell—joined a multimillion-dollar industry effort to stave off new regulations to address climate change, they were quietly safeguarding billion-dollar infrastructure projects from rising sea levels, warming temperatures and increasing storm severity." Lieberman & Rust, *supra* note 23.

132 "[N]o major oil company is investing to support its goals of keeping global warming 'well below' 2˚C and to 'pursue efforts' to limit it to a maximum of 1.5˚C. Investors are under huge pressure to determine which energy companies are 'Paris-compliant.'" Press Release, Carbon Tracker Initiative, Oil and Gas Companies Approve $50 Billion of Major Projects that Undermine Climate Targets and Risk Shareholder Returns (Sept. 5, 2019), https://carbontracker.org/oil-and-gas-companies-approve-50-billion-of-major-projects-that-undermine-climate-targets-and-risk-shareholder-returns/.

legitimacy of their business, then attain the confidence of law makers and stealthily acquire a chair at the legislative table. Truly, a deceptive means to a climate-apathetic, profit-maximizing end.

B. Relying on Only Regulations Has Proven Ineffective in the U.S.

Since the 1990s, European countries have taken unilateral action to combat climate concerns, as well as region wide efforts such as the ETS to meet greenhouse gas emission goals.[133] Unlike Europe, the U.S. is afflicted with a history of ineffective climate regulation. Despite publicizing America's efforts to reduce carbon emissions, in 2017 President Trump retreated from the global stage by withdrawing America's ratification of the Paris Agreement,[134] undoing the work of President Obama, citing "unfair economic burden imposed on American workers, businesses, and taxpayers."[135] The Environment Protection Agency ("EPA") is an independent agency of the U.S. federal government in charge of stipulating and amending regulations to protect human and environmental health. Like all American "independent" agencies, it operates at the whim of the incumbent. As such, when Trump assumed Presidency in 2017, he rolled back many climate change policies that took effect under the Obama administration and limited funding for environment-related research.[136] Subsequent policy changes were geared to benefit corporations—largely oil and gas ones.[137] In the words of a Yale University sociologist, "What is most unfortunate is that polarization around climate change…was manufactured by those whose financial and political interests were most threatened."[138] Although President Biden rapidly initiated climate friendly policies upon election in 2021, the EPA will always be susceptible to political oscillations. Meaningful change requires climate issues to be freed from the shackles of bipartisan disagreement. This polarization has impeded policy solutions in the U.S.

Regrettably, new regulations cannot be left to state governments. While American states hold power to set their own environmental regulations *and* have tried to sue corporations for their hand in worsening global warming,

133 *See supra* Part II(E).

134 A United Nations effort to strengthen the global response to rising temperatures.

135 Press Statement, Michael R. Pompeo, Sec'y of State, U.S. Dep't of State, On the U.S. Withdrawal from the Paris Agreement (Nov. 4, 2019), https://2017-2021.state.gov/on-the-u-s-withdrawal-from-the-paris-agreement/index.html.

136 *A Running List of How President Trump Is Changing Environmental Policy*, *supra* note 125.

137 *Id.*

138 Lieberman & Rust, *supra* note 23.

climate change is a national issue that requires consensus and equal implementation throughout the country.[139] One state's success in crafting and implementing climate-friendly laws could have a positive domino effect on others, but this process is lengthy, inefficient and unpredictable. Patchy state regulations will not pack a punch and are not the optimal solution.

C. Market-Based Solutions Premeditated by Oil Industry

Although oil companies invest in carbon removal efforts and dedicate funds to research clean energy, their policy proposals substantially differ from the ones backed by environmentalists. Take the carbon tax for example.[140] While Big Oil advocates for a carbon tax reaching $65-per-ton by 2030, environment activists propose a tax that extends to $115-a-ton by 2030. Environmentalists cite the need for a fast-paced response to rapidly cut carbon emissions and incentivize consumers to choose relatively cheaper, green energy, which explains the divergence between the two proposed rates.[141] Under the guise of an organization called the "Climate Leadership Council," the petroleum industry is using their version of the carbon tax as a corporate strategy. By self-proposing a tax on themselves, the industry leaves behind an impression of goodwill. It eliminates the government's struggle in imposing a tax on a very powerful industry, which in turn increases the likelihood that their considerably low tax proposals will be adopted. Likewise, during the 2015 Paris Agreement, BP was one of few oil companies to advocate for a carbon tax, with a dedicated webpage that read, "We believe that carbon pricing provides the right incentives for

139 Other reasons include: (1) "[S]tates often don't enforce the laws within their own borders when the people primarily harmed live downwind or downriver in another state;" (2) "many significant violators are national companies that operate in many states;" (3) "many states don't take action to enforce criminal environmental laws;" (4) "states don't always have the political will to take on powerful companies;" (5) "companies that play by the rules need protection from companies that cheat;" (6) sidelining the EPA won't empower states, it will weaken them…A diminished EPA will encourage companies to push back against state enforcers." Cynthia Giles, *Why We Can't Just Leave Environmental Protection to the States*, GRIST (Apr. 26, 2017), https://grist.org/opinion/why-we-cant-just-leave-environmental-protection-to-the-states/.

140 See graph "Two U.S. Carbon Tax Proposals" comparing the Baker-Shultz proposal proposed by the Climate Leadership Council, which is run by the "leaders" of the petroleum industry, versus the Energy Innovation and Carbon Dividend Act's model, put forth by environment activists which advocates that "[c]utting carbon emissions rapidly and deeply will be costly but necessary if the world aims to keep the global temperature increase to no more than 1.5 degrees Celsius." Marianne Lavelle, *Carbon Tax Plans: How They Compare and Why Oil Giants Support One of Them*, INSIDE CLIMATE NEWS (Mar. 7, 2019), https://insideclimatenews.org/news/07032019/carbon-tax-proposals-compare-baker-shultz-exxon-conocophillips-ccl-congress.

141 *Id.*

everyone. . . ."[142] Yet the oil giant spent $13 million to defeat a proposal in Washington state that would do just that.[143] While Big Oil purport to invest in renewables and endorse low-carbon alternatives,[144] they are multiplying their oil and gas production.[145] Through the initiation of their own policies, they hope to eradicate the need for governmental regulation that could severely undercut their activities and profits, as well as hedge future liability from litigation based on economic harm stemming from climate change.[146] Relying on climate change efforts initiated by fossil fuel companies naturally incorporates the megacorporations' motives.

D. Effect of COVID-19 on the Oil Industry and the Environment

In the early months of the 2020 pandemic, countries around the world came to a halt as they initiated social and economic lockdowns, which was followed by the stock market crash spiraling into the COVID-19 recession.[147] At the onset of the pandemic, demand for crude oil crashed as the aviation and transportation industries were hit hard by travel restrictions, unemployment, and sluggish demand for petroleum and its byproducts. On the supply side, prior to the pandemic, American oil production was booming. However, without the OPEC regulating the price of oil, the sudden drop in demand in the face of ample supply meant that oil prices propelled below zero.[148] Both Exxon and BP took enormous blows to their

142 Kate Aronoff, *BP Claims to Support Taxing Carbon, But It's Spending $13 Million Against an Initiative that Would Do Just That*, INTERCEPT (Nov. 1, 2018, 12:19 PM), https://theintercept.com/2018/11/01/bp-washington-state-carbon-tax-initiative.

143 *Id.*

144 "Despite funnelling tens of billions of dollars into their traditional oil and gas businesses, BP and its peers Royal Dutch Shell, Total, Chevron and Saudi Aramco are increasingly investing smaller sums in low carbon technologies and clean energy start-ups." Anjli Raval, *Big Oil Venture Funds Target Green Investments*, FIN. TIMES (Aug. 28, 2019), https://www.ft.com/content/80152644-c8ba-11e9-af46-b09e8bfe60c0.

145 "Even as concerns about global warming grow, energy firms are planning to increase fossil-fuel production. None more than ExxonMobil." *The Truth About Big Oil and Climate Change*, ECONOMIST (Feb. 9, 2019), https://www.economist.com/leaders/2019/02/09/the-truth-about-big-oil-and-climate-change.

146 "Despite a burst of environmental deregulation and climate change skepticism from President Donald Trump, most large oil and gas companies today acknowledge climate change and try to push for policy solutions that will still leave them a significant role in the energy future." Justin Worland, *Even Oil Companies Are Now Saying Climate Change Will Hurt Their Business*, TIME (Mar. 1, 2018, 12:11 PM), https://time.com/5178262/climate-change-oil-companies-future.

147 Press Release, World Bank, COVID-19 to Plunge Global Economy into Worst Recession since World War II (June 8, 2020), https://www.worldbank.org/en/news/press-release/2020/06/08/covid-19-to-plunge-global-economy-into-worst-recession-since-world-war-ii.

148 "Negative oil rates came about for the first time in history in April 2020 for West Texas Intermediate (WTI) contracts. This happened because the coronavirus caused demand for oil to halt,

businesses. BP slashed its workforce, sold off its petrochemical business, and wrote down its assets by $17.5 billion.[149] Exxon, once the most stable company on the stock market, experienced triple consecutive quarterly losses, totaling $680 million by September 2020, "down from a $3.2bn profit in the same period last year."[150] As Chevron's capital expenditures were also reduced by half, it planned to cut costs by terminating fifteen percent of its workforce.[151]

During this time, there were fewer cars on the road, fewer flights, and overall less demand for consumption of goods. NASA confirmed that carbon emissions dropped, especially in epicenters such as Wuhan, Italy, Spain and the U.S.[152] There were temporary noticeable improvements in air quality and reduction in water pollution around the world. After the oil futures market reached sub-zero levels and uncertainty riddled the petroleum business, the fossil fuel industry refocused its attention on capturing the renewables market.[153] Regrettably, as fear of the virus eased and lockdowns ended, optimistic news dissipated by midyear-2020. Scientists now predict that as restrictions loosen up, global pollution levels may even surpass pre-COVID predictions.[154] In the U.S., environmentalists also fear the future cost of clean-up of abandoned oil rigs[155] attributable to

---

while supply cuts from the Organisation of the Petroleum Exporting Countries (OPEC) weren't scheduled to come into effect until 1 May 2020 – which was after the expiry date for May 2020 futures." Callum Cliffe, *What Do Negative Oil Prices Mean?*, IG (May 7, 2020, 10:05 AM), https://www.ig.com/en/news-and-trade-ideas/what-do-negative-oil-prices-mean--200507.

149 *See* Hanna Ziady, *BP Warns of $17.5 Billion Hit as Pandemic Accelerates Move Away from Oil*, CNN BUSINESS (June 15, 2020, 12:31 PM), https://www.cnn.com/2020/06/15/business/bp-oil-demand-coronavirus/index.html; Sarah McFarlane, *BP Exits Petrochemicals Business in $5 Billion Deal*, WALL ST. J. (June 29, 2020, 2:04 PM), https://www.wsj.com/articles/bp-exits-petrochemical-business-in-5-billion-deal-11593424980?mod=e2fb.

150 Myles McCormick, *ExxonMobil Racks Up a Third Straight Loss as Pandemic Dents Demand*, FIN. TIMES (Oct. 30, 2020), https://www.ft.com/content/64bb733e-2266-4bef-8a86-289afb8d18ad.

151 *Id.*

152 *See* Sulaman Muhammad, Xingle Long & Muhammad Salman, *COVID-19 Pandemic and Environmental Pollution: A Blessing In Disguise?*, 728 SCI. TOTAL ENV'T (2020), https://www.sciencedirect.com/science/article/abs/pii/S0048969720323378.

153 Richard Stubbe, *Oil & Gas Majors Pivoting to Renewables in Pandemic: Q&A*, BLOOMBERGNEF (Aug. 4, 2020), https://about.bnef.com/blog/oil-gas-majors-pivoting-to-renewables-in-pandemic-qa/.

154 *See* Beth Gardiner, *Why COVID-19 Will End Up Harming the Environment*, NAT'L GEO. (June 18, 2020), https://www.nationalgeographic.com/science/2020/06/why-covid-19-will-end-up-harming-the-environment/.

155 "[E]nvironmental groups fear that oil and gas producers will also respond to this week's crash by simply pausing production at many wells for months or years until it becomes profitable to pump again—or abandoning them altogether, leaving taxpayers to pay for cleanup costs." Naveena Sadasivam, *Coronavirus Fallout Could Be the 'Nail in The Coffin' for Smaller Oil Companies* (Mar. 13, 2020), https://grist.org/energy/coronavirus-fallout-could-be-the-nail-in-the-coffin-for-smaller-oil-companies/.

the bankruptcy-ridden American shale oil businesses,[156] further burdening the government.[157]

Given that the biggest corporations within the fossil fuels, plastics, airlines, and automobiles industries suffered considerably, they have been "bolder than ever" in pursuing governmental favors including pleas for cash and regulatory rollbacks. All the while they lobby for pandemic-related relief and tax cuts, which could render them more powerful and profitable than ever before.[158] On the government's side, in 2019 the Trump administration "effectively suspended enforcement of air and water pollution regulations, curtailed states' ability to block energy projects, and suspended a requirement for environmental review and public input on new mines, pipelines, highways, and other projects."[159] President Trump effectively pushed the environment to the backburner, indefinitely. Leaked internal documents also revealed that before the pandemic, Exxon had already made plans to "increase annual carbon-dioxide emissions by as much as the output of the entire nation of Greece"—plans which Exxon hopes to renew after the downturn.[160] It was only at the onset of 2021, when newly-elect President Biden quickly adopted climate friendly policies by rejoining the Paris Agreement, suspending new permits for oil drilling on public lands, directing federal agencies to purchase electric cars, and among other things, instituting the National Climate Task Force to synthetize climate efforts.[161]

Tides turned quicker across the Atlantic where BP and Shell fast-tracked their transition to clean energy, reducing investments in oil production, and

156 "U.S. oil companies, especially smaller ones, are now looking to make deep cuts. Industry analysts warn of possible bankruptcies, especially if oil remains where it's fallen to, in the $30 per barrel range. Companies operating in Texas's Eagle Ford Shale need prices between $40 to $60 a barrel to remain profitable." Jeff Brady, *Trump Steps in to Help Oil Industry Facing Its Own Coronavirus Crisis*, NPR (Mar. 14, 2020, 7:00 AM), https://www.npr.org/2020/03/14/815039722/trump-steps-in-to-help-oil-industry-facing-its-own-coronavirus-crisis.

157 "The more operators that close up shop during this price shock, the higher the risk that they will walk away from their cleanup responsibilities and leave the federal government holding the bag." Sadasivam, *supra* note 155.

158 *Id.*

159 *Id.*

160 "As recently as July, however, Exxon indicated that it's merely delaying many projects to preserve cash during the downturn rather than canceling them." Kevin Crowley & Akshat Rathi, *Exxon's Plan for Surging Carbon Emissions Revealed in Leaked Documents*, BLOOMBERG (Oct. 5, 2020, 4:00 AM), https://www.bloomberg.com/news/articles/2020-10-05/exxon-carbon-emissions-and-climate-leaked-plans-reveal-rising-co2-output.

161 David R. Baker & Ari Natter, *Biden Moves to Rapidly Adopt Climate Policies, Stunning the Oil and Gas Industry*, FORTUNE (Jan. 28, 2021, 5:01 AM), https://fortune.com/2021/01/28/biden-climate-oil-and-gas/.

moving to become carbon neutral, owing to the pandemic.[162] Their leaders speak of protecting their shareholders by preparing for upcoming tougher climate regulations.[163] On the government side, in December 2020 the European Union leaders reaffirmed their dedication to climate change and agreed to cut back carbon emissions by 55 percent.[164] Although there is fear that "the still-unfolding health and economic crises could pull leaders' attention away from the slower-moving disaster of climate change, which had finally been moving up the political agenda last year as youth strikes drove home its urgency," both European oil leaders and governments are making meaningful efforts to fight global warming in the face of a pandemic.[165]

IV. WORKING TOWARDS AN EFFECTIVE SOLUTION

During the 2015 Paris Summit on Climate Change, many countries ratified the Paris Agreement, including the U.S. for the very first time. Since then, countries all over the world have been enforcing laws to comply with the agreed upon regulations to reduce carbon dioxide emissions in hopes of decreasing global temperatures. Below, I propose the continued use of market-based solutions already in place, mandated by industry-wide federal regulations and bolstered by climate change legislations tackling the issue of global warming left, right, and center.

A. Regulation or Market-Based Solution? Both.

Regulations and market-based solutions should supplement one another. In order to exploit already effective solutions—including the carbon tax, investments in cleaner energy and renewables, research into technologies that reduce the carbon footprint or make energy expenditure more efficient––*and* the power of lawmaking, national governments need to mandate and implement these solutions, while remaining independent from corporate influences. This requires the restriction of lobbying efforts by Big Oil on matters of the environment, creation of bipartisan regulatory bodies, and supervision of who can sit on the legislative table. Governments must work *with* corporations, not *for* them. The oil industry's participation in

162 Clifford Krauss, *U.S. and European Oil Giants Go Different Ways on Climate Change*, N.Y. TIMES (Dec. 11, 2020), https://www.nytimes.com/2020/09/21/business/energy-environment/oil-climate-change-us-europe.html.

163 *Id.*

164 Monika Pronczuk, *E.U. Agrees to Slash Carbon Emissions by 2030*, N.Y. TIMES (Dec. 11, 2020), https://www.nytimes.com/2020/12/11/world/europe/eu-climate-emissions.html.

165 *See* Gardiner, *supra* note 154.

promoting climate change efforts should be limited to, for example, providing funds for unbiased, research backed data on solutions that worked to improve climate concerns. Governments need to incentivize more research and development into climate change technologies. They must also aggressively enforce laws to limit the carbon dioxide emissions and create "causes of actions" and effective recourse for victims of global warming. Strict penalties for future corporate violations should be administered to incentivize rule-following.

Both governments and oil industry need to renew their focus on not only expanding and funding renewables and nuclear energy, but also setting pragmatic goals to achieve independence from fossil fuel in the coming decades. This requires more funding to bolster research and development in cleaner energy. The successes of the European models—such as the EU-wide ETS regulations and carbon taxes instituted in several countries—should serve as exemplar and be considered when drafting the American one. By putting a tax on carbon, the carbon tax directly forces emitters to internalize the environmental cost associated with their fossil fuel use. To attain legitimacy and ensure long-term enforcement of the carbon tax, the federal government should integrate them into other tax policies such as by offsetting income tax for the poor, or use tax revenues to directly increase investment in construction or research and development of renewable energies.

Furthermore, corporate and market-based solutions proposed by the oil and gas companies should be regularly reexamined under independent authorities comprising scientists and environmentalists. These solutions should be implemented on a nationwide or even international scale supplemented by government regulations that truly undercut petroleum production and incentivize development of cleaner energy.

In the U.S., states should be allowed to administer and implement laws that are stronger or stricter than federal laws, in order to meet the unique demands of the region. Because corporations do not want to face varying standards from state-to-state and risk violating stricter laws in one region, they will invariably advocate for a comprehensive federal law that would preempt state regulations. To prevent conflict between state and federal laws, national laws must account for state-to-state needs. This will provide the federal government with an opportunity to realign its interests with scientists to set out stringent regulations that inhibit the present-day unrestricted exploration

of oil and gas fields and other newer methods of oil extraction such as fracking that have gained popularity at the expense of our planet.

Some researchers say that existing environment *regulations* do not equate to environment *protection*.[166] While that is true, the environment can be protected through an aggressive and holistic approach. Accordingly, governments across the world need to work together via international frameworks; initiate short- and long-term carbon emission targets; police one another in maintaining those efforts; invest in new carbon-neutral technologies and renewable energy sources; be incentivized to share their innovations in cleaner energy and advances in climate policies; set and meet realistic goals to become petroleum-free; and synergize government regulations with market-based solutions to further climate goals.

B. Role of Shareholders and Investors

Public awareness is catching up, and investors are pushing executives to endorse environmental concerns. Shareholders of petroleum companies will continue to demand investment in alternative clean energy as a means to legitimize their business and keep their stock afloat. As people frown upon fossil fuel usage, and as oil and gas companies are sanctioned by courts and governments, oil demand will weaken. This will further incite investors to capitalize on alternative energy markets, accelerating the growth of renewables, clean energy and newer technologies (as has happened during the pandemic). As these new markets grow and profit from becoming economies of scale, the price of clean energy will rival the price of fossil fuels. Hopefully, the industry itself will (slowly but surely) curtail its oil and gas exploration and production, revolutionizing the future of energy.

CONCLUSION

Today, governments worldwide must recognize (1) the imminent consequences of global warming and climate change, (2) the environmental and economic harm environmental disasters could precipitate, and (3) the duplicitous nature of oil and gas companies like Shell, BP, Exxon and Chevron when they market themselves as *green* and environmentally conscious. Corporations are profit-driven entities that work towards their survival and expansion. Nonetheless, these oil giants have taken tentative

166 Robert H. Nelson, *Does Environmental Regulation Equal Environmental Protection? How Current Environmental Policy is Failing*, HERITAGE FOUND. (Apr. 21, 1992), https://www.heritage.org/environment/report/does-environmental-regulation-equal-environmental-protection-how-current.

measures to promote climate friendly changes. For a meaningful advancement of greener policies, the U.S. and world governments need to adopt conscientious regulations that are independent of corporate influences, while working synergistically alongside them to support the market-based solutions initiated by the global oil industry. In this Note, I propose the use of these existing solutions, but mandated by industry-wide government regulations, and bolstered by aggressive climate change legislation tackling the issue of global warming from every direction.

Shraddha Gupta *

* Shraddha Gupta is a Primary Editor at Washington University Global Studies Law Review and a J.D. Candidate at Washington University School of Law (2021).