DRIVING ON EMPTY: THE FATE OF FOSSIL FUEL COMPANIES IN CLIMATE NUISANCE LITIGATION

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ABSTRACT

States and municipalities are increasingly attempting to use climate nuisance litigation to hold fossil fuel companies such as BP, Chevron, ConocoPhillips, Exxon Mobil, and Royal Dutch Shell, accountable for climate change. Climate plaintiffs across the country are requesting a total of approximately two hundred billion dollars in damages. If these plaintiffs manage to win their lawsuits, defendants simply do not have the cash flow to pay such large damage awards. Defendants' principal assets are associated with fossil fuel reserves, so extracting oil and gas resources as a method of paying damages would exacerbate climate change. As a result, the oil and gas companies could be compelled to file for bankruptcy. In either the sale of the companies or their assets, defendants would be transferring their oil and gas resources to other fossil fuel companies, whose actions would further cause detrimental effects to the environment. Additionally, in the bankruptcy context, climate plaintiffs would be considered unsecured creditors and would be paid out only after the secured creditors receive their full payments, so they may not even be paid sufficiently. Therefore, if plaintiffs overcome their obstacles in litigation and reach the discovery stage, the best outcome is for the parties to form a Master Settlement Agreement. Plaintiffs would agree to drop their lawsuits, and defendant oil and gas companies would agree to increase their use of renewables, transition away from fossil fuels, and leave a certain portion of unburnable carbon in the ground.

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INTRODUCTION

Anthropogenic greenhouse gases caused by fossil fuel combustion are contributing to severe changes in climate, which will continue to adversely impact human health and safety.[1] In response, states and municipalities are increasingly attempting to use climate nuisance litigation to hold fossil fuel companies accountable. Climate plaintiffs claim that the defendant oil and gas companies have known for decades that their fossil fuel products pose risks of "severe" impacts on the global climate.[2] So far, none of these plaintiffs have been successful. Much of the discussion surrounding these lawsuits is about the numerous and challenging threshold issues plaintiffs face including displacement, preemption, political question, and standing.[3] What has not been discussed is what will happen if plaintiffs succeed.

Almost all plaintiffs request monetary damages.[4] Some request equitable relief to abate the public nuisance and trespass.[5] In total, however, plaintiffs claim roughly two hundred billion dollars in damages and in funds needed to adapt and mitigate climate change.

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1. The climate changes we are experiencing endanger our health and safety by affecting "our food and water sources, the air we breathe, the weather we experience, and our interactions with the built and natural environments." U.S. GLOBAL CHANGE RESEARCH PROGRAM, THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES 2 (Allison Crimmins et al. eds., 2016); *see* U.S. GLOBAL CHANGE RESEARCH PROGRAM, FOURTH NATIONAL CLIMATE ASSESSMENT 541 (D.R. Reidmiller et al. eds., Vol. II 2018). Climate change is expected to intensify health issues both in developing and developed countries. Generally, there is a greater likelihood of injury, disease, and death due to more intense heat waves and fires. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2014 IMPACTS, ADAPTATION, AND VULNERABILITY, SUMMARY FOR POLICYMAKERS 19 (Christopher B. Field et al. eds., 2014). Diminished food production in poor regions will lead to increased likelihood of under-nutrition. *Id.* at 19. Vulnerable populations face higher risks from lost work capacity and reduced labor productivity. *Id.* at 19. Moreover, there are increased risks from food- and water- borne diseases as well as vector borne diseases. *Id.* at 19–20.

2. Complaint at 7, City of Oakland v. BP P.L.C., No. RG17875889 (N.D. Cal. Sep. 19, 2017).

3. Michael B. Gerrard, *What Litigation of a Climate Nuisance Suit Might Look Like*, 12 SUSTAINABLE DEV. L. & POL'Y 12, 12 (2011).

4. The City of San Francisco and the City of Oakland request an abatement fund remedy paid for by defendants. Complaint at 39, People of the State of California (San Francisco) v. BP P.L.C., CGC-17-561370 (Cal. Super. Ct. San Francisco Cnty. Sep. 19, 2017); Complaint at 34, City of Oakland v. BP P.L.C., No. RG17875889 (N.D. Cal. Sep. 19, 2017).

5. Complaint at 140, Rhode Island v. Chevron Corp., No. PC-2018-4716 (R.I. Super. Ct. July 2, 2018); Complaint at 63, City of New York v. BP P.L.C., No. 18-cv-182 (S.D.N.Y. Jan. 9, 2018).

Should plaintiffs prevail, their lawsuits will actually lead to adverse unintended consequences.

First, and most importantly, the assets that corporations could use to pay large monetary damages are associated with fossil fuel reserves that should be left in the ground in order to limit global warming to two degrees Celsius (2ºC) above pre-industrial levels.[6] Based on the composition of their assets analyzed in Part II of this Note, defendants do not maintain enough cash flow each year to pay large monetary damages. They would instead need to extract oil and gas from their vast reserves, contributing to rise in sea level, CO_2, global mean surface temperature, and intensified health issues.

Second, defendants may not be able to pay monetary damages in the range that current plaintiffs request. As a result, defendants may be compelled to file for bankruptcy through reorganization or liquidation—both of which pose problems for plaintiffs. The most critical issue is that plaintiffs are unsecured creditors, who will be paid only after secured creditors receive their full payments.[7] As a result, plaintiffs may not obtain the funding they need to pay for costs associated with abating the harm from climate change. Moreover, in the process of selling assets, defendants may simply transfer the ownership of their fossil fuel reserves and the assets associated with extracting and transporting the fossil fuel products to other oil and gas

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6. JAMES LEATON, UNBURNABLE CARBON—ARE THE WORLD'S FINANCIAL MARKETS CARRYING A BUBBLE? CARBON TRACKER INITIATIVE 6 (2014). The 2ºC threshold was a commitment adopted by emitting countries in the Paris Agreement. Paris Agreement to the United Nations Framework Convention on Climate Change, art. 2, Jan. 29, 2016, FCCC/CP/2015/10/Add.1[hereinafter Paris Agreement]. A 2ºC increase in global temperature will disrupt the climate system in irreversible ways. WILL STEFFEN, CLIMATE COUNCIL, UNBURNABLE CARBON: WHY WE NEED TO LEAVE FOSSIL FUELS IN THE GROUND 1, 8 (2015). The European Geosciences Union published a study analyzing the difference in impact of climate change at warming levels of 1.5ºC and 2ºC. Tabea K. Lissner, et al., *Differential Climate Impacts for Policy-Relevant Limits to Global Warming: The Case of 1.5ºC and 2ºC*, 7 EARTH. SYST. DYNAM. 327, 327 (2016). The study revealed that there would be "substantial differences" in the two different warming levels. *Id.* Bob Silberg of NASA's Jet Propulsion Laboratory summarized the differences stating, "heat waves would last around a third longer, rain storms would be about a third more intense, the increase in sea level would be approximately that much higher and the percentage of tropical coral reefs at risk of severe degradation would be roughly that much greater." Bob Silberg, *Why a Half-Degree Temperature Rise is a Big Deal*, NASA (June 29, 2016), https://climate.nasa.gov/news/2458/why-a-half-degree-temperature-rise-is-a-big-deal/ [https://perma.cc/P46K-B7QG].

7. Christopher M.E. Painter, *Tort Creditor Priority in the Secured Credit System: Asbestos Times, the Worst of Times*, 36 STAN. L. REV. 1045, 1079 (1984).

companies. Those purchasing companies' use of the assets will cause greenhouse gas pollution and catastrophic climate-related effects.

Therefore, if climate plaintiffs successfully overcome the threshold issues and reach the discovery stage, the best outcome is not for plaintiffs to obtain a court-determined judgment for monetary damages. Instead, the parties should form a Master Settlement Agreement similar to the one that states entered into with tobacco industry companies to settle their Medicaid lawsuits in 1998.[8] In the climate nuisance litigation context, plaintiffs would agree to drop their lawsuits, and defendant oil and gas companies would agree to transition away from fossil fuels and leave a certain portion of unburnable carbon in the ground.

Part I of this Note provides a background on oil and gas companies' contributions to global warming, the global carbon budget and unburnable carbon, as well as climate nuisance litigation. Part II will assess the type of relief and amount of monetary damages plaintiffs request and evaluate what assets defendants could use to pay court-determined damages if they are found liable. Part III proposes that forming a Master Settlement Agreement is the best outcome of climate nuisance litigation if plaintiffs manage to overcome threshold issues and reach the discovery stage.

I. BACKGROUND

This part explores the relevant background of climate nuisance litigation. Section I.A analyzes oil and gas companies' contributions to global warming. Section I.B describes the concept of the global carbon budget and unburnable carbon. Section I.C provides a brief history of climate nuisance claims, focusing on the obstacles faced by plaintiffs as well as the pending climate nuisance claims.

A. Oil and Gas Companies' Contributions to Global Warming

The majority of emissions can be traced back to a surprisingly small number of fossil fuel producers. Richard Heede, the co-founder and co-director of the Climate Accountability Institute, analyzed the production records of producers of oil, natural gas, coal, and cement

8. F.A. Sloan et al., *Impacts of the Master Settlement Agreement on the Tobacco Industry*, 13 TOBACCO CONTROL 356, 356 (2004).

between 1854 and 2010.[9] During this time, a total of 914 billion tons of CO_2-equivalent ($GtCO_2e$)—63% of global industrial carbon dioxide (CO_2) and methane (CH_4) emissions from 1751 to 2010—were traced to 90 international entities.[10] Between 1751 and 2010, Chevron, USA alone accounted for 3.52% of global CO_2 and CH_4 emissions, the highest of any investor- or state-owned entity.[11]

A more recent study conducted by Brenda Ekwurzel, a senior climate scientist and the director of the Union of Concerned Scientists, traced emissions sources from industrial carbon producers to specific climate impacts and their historic responsibility for climate change.[12] The study traced the contribution of historical (1880 to 2010) and recent (1980 to 2010) emissions of industrial carbon producers to the rise in global atmospheric CO_2, surface temperature, and sea level.[13] Notably, fourteen carbon producers "were consistently among the top 20 largest individual company contributors to each global impact across both time periods."[14] These include seven investor-owned companies, Chevron, ExxonMobil, BP, Royal Dutch Shell, ConocoPhillips, Peabody Energy, and Total, as well as seven majority state-owned companies, Saudi Aramco, Gazprom, National Iranian Oil Company, Pemex, Petroleos de Venezuela, Coal India, and Kuwait Petroleum.[15] Between 1880 and 2010, these companies contributed approximately 13-16% of increase in global sea level.[16] In the same period, more than 6% of the rise in global sea level resulted from the emissions traced to ExxonMobil, Chevron, and BP.[17] Recent combustion of products from the top twenty companies contributed approximately 5-6% of the historical rise in global sea level.[18] Chevron,

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9. Richard Heede, *Tracing Anthropogenic Carbon Dioxide and Methane Emissions to Fossil Fuel and Cement Producers, 1854-2010*, 122 CLIMATE CHANGE 229, 229 (2013).

10. *Id.* at 229, 234.

11. *Id.* at 237.

12. Brenda Ekwurzel et al., *The Rise in Global Atmospheric CO_2, Surface Temperature, and Sea Level from Emissions Traced to Major Carbon Producers*, 144 CLIMATIC CHANGE 579, 580 (2017).

13. *Id.* at 579.

14. *Id.* at 586.

15. *Id.*

16. *Id.*

17. Peter C. Frumhoff & Myles Allen, *Big Oil Must Pay for Climate Change. Now We Can Calculate How Much*, THE GUARDIAN (Sep. 7, 2017, 10:00 AM), https://www.theguardian.com/commentisfree/2017/sep/07/big-oil-must-pay-for-climate-change-here-is-how-to-calculate-how-much [https://perma.cc/3LDQ-SPMA].

18. Ekwurzel, *supra* note 12, at 586.

ExxonMobil, and BP contributed approximately 7% of historical rise in global mean surface temperature (GMST), and approximately 3% of recent rise in GMST.[19] These studies reveal how emissions traced to products sold by specific fossil fuel companies have caused the rise in global atmospheric CO_2, surface temperature, and sea level.[20]

B. Global Carbon Budget and Unburnable Carbon

One of the key aims of the Paris Climate Agreement is to keep the global temperature rise below 2ºC above pre-industrial levels.[21] A carbon budget is defined by the Carbon Tracker Initiative as "the cumulative amount of carbon dioxide (CO_2) emissions permitted over a period of time to keep within a certain temperature threshold."[22] "Unburnable carbon" pertains to fossil fuel energy sources that cannot be burned if the world is to comply with a given carbon budget.[23] A majority of the fossil fuel reserves cannot be burned in order to stay

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19. *Id.* at 585.

20. As will be discussed further in Section I.C, causation is one of the many obstacles faced by climate nuisance plaintiffs. *See also* Gerrard *supra* note 1, at 13. Data linking certain fossil fuel companies to climate change could help climate plaintiffs get one step closer to overcoming causation issues in climate nuisance litigation as well as assists juries and judges in monetizing damages caused by climate defendants. Frumhoff, *supra* note 17.

21. Paris Agreement, art. 2, Jan. 29, 2016, FCCC/CP/2015/10/Add. The Paris Agreement emphasizes, "[h]olding the increase in global average temperature to well below 2ºC above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5ºC above pre-industrial levels[.]" *Id.* New York City, for example, has recognized this "critical goal" in order to "prevent[] the worst projected climate impacts, both locally and globally." Complaint at 18-19, City of New York v. BP P.L.C., No. 18 cv 182 (S.D.N.Y. Jan. 9, 2018) (citing CITY OF NEW YORK, 1.5ºC ALIGNING NEW YORK CITY WITH THE PARIS CLIMATE AGREEMENT 5 (2017). Notably, the Paris Agreement does not define what period in history is "pre-industrial." However, the IPCC Special Assessment Report on Global Warming of 1.5ºC uses 1850-1900 as the reference period to approximate pre-industrial temperature. MYLES ALLEN ET AL., IPCC SPECIAL REPORT ON GLOBAL WARMING OF 1.5ºC FREQUENTLY ASKED QUESTIONS 4 (2018).

22. LUKE SUSSAMS, CARBON TRACKER INITIATIVE BLOG, CARBON BUDGETS: WHERE ARE WE NOW? 1 (Feb. 6, 2018), https://www.carbontracker.org/carbon-budgets-explained/ [https://perma.cc/G29U-KDLA]. Different carbon budgets have been proposed by various institutions. *Id.* For example, the carbon budget proposed by the International Energy Agency (IEA) and the Intergovernmental Panel on Climate Change (IPPCC) "are not immediately comparable." *Id.* Whereas the IEA offers a carbon budget just for the energy sector, the IPCC estimates a carbon budget considering all anthropogenic sources of CO_2. *Id.* at 3.

23. *Unburnable Carbon*, CARBON TRACKER INITIATIVE BLOG (Aug. 23, 2017), https://www.carbontracker.org/terms/unburnable-carbon/ [https://perma.cc/8QP5-QGGE].

below the 2ºC threshold.[24] As of 2013, between 60 and 80 percent of publicly listed companies' coal, oil, and gas reserves were "unburnable."[25] Today, for the planet to have a 50/50 chance of staying below the 2ºC threshold, 88% of global coal reserves, 53% of gas reserves, and 35% of oil reserves "must be left in the ground, unburned."[26] In fact, fossil fuel corporations already maintain "five times the fossil fuels reserves needed to take us to 2ºC warming."[27] At the current rate, the global carbon budget will run out in 16 years.[28] However, capital markets continue to finance new exploration, adding to fossil fuel companies' reserves.[29] Accordingly, "[t]he conventional wisdom on the world's stock markets is that all listed reserves will be exploited and [burned]."[30] This mentality will drastically need to change in order to prevent the catastrophic effects of climate change that will occur if the planet surpasses the 2ºC threshold.[31]

C. Evolution of Climate Nuisance Litigation to Combat Climate Change and Threshold Issues Plaintiffs Continue to Face in Litigation

The Trump Administration has committed itself to rescinding President Obama's climate-policy legacy by taking actions such as rolling back the Clean Power Plan and pulling out of the Paris Agreement.[32] Andrew Wheeler, the current EPA Administrator and climate denier,[33] has attempted to curtail key regulatory measures

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24. STEFFEN, *supra* note 6, at 20.

25. JAMES LEATON, CARBON TRACKER INITIATIVE, UNBURNABLE CARBON 2013: WASTED CAPITAL AND STRANDED ASSETS 4 (2013).

26. STEFFEN, *supra* note 6, at iii.

27. CARBON TRACKER INITIATIVE, UNBURNABLE CARBON—ARE THE WORLD'S FINANCIAL MARKETS CARRYING A CARBON BUBBLE? 18 (2017).

28. *Id.*

29. *Id.*

30. *Id.* at 20.

31. *Id*. See also Carbon Brief, *The Impacts of Climate Change at 1.5C, 2C and Beyond* (Oct. 4, 2018), https://interactive.carbonbrief.org/impacts-climate-change-one-point-five-degrees-two-degrees/?utm_source=web&utm_campaign=Redirect [https://perma.cc/F27U-3CTC]

(showing an interactive graph to view the drastic impact of 2ºC).

32. Carolyn Kormann, *In Andrew Wheeler, Trump Gets a Cannier E.P.A. Chief*, NEW YORKER (Jul. 11, 2018), https://www.newyorker.com/news/news-desk/in-andrew-wheeler-trump-gets-a-cannier-epa-chief [https://perma.cc/WY5M-6XMK]; Robinson Meyer, *The Indoor Man in the White House*, ATLANTIC (Jan. 13, 2019), https://www.theatlantic.com/politics/archive/2019/01/trump-withdraws-paris-agreement/579733/ [https://perma.cc/EZY3-KUA2].

33. Kormann, *supra* note 32.

designed to address climate change.[34] These include restrictions on pollution from coal plants, rules to prevent methane emissions from oil and gas drilling, and stricter fuel efficiency standards for cars.[35] In this political climate, cities and states have been turning to alternative solutions to fight climate change.

One avenue is through public nuisance litigation. Public nuisance is defined as "an unreasonable interference with a right common to the general public."[36] Circumstances where an interference with a public right is unreasonable include:

> Whether the conduct involves a significant interference with the public health, the public safety, the public peace, the public comfort or the public convenience; or
> whether the conduct is proscribed by a statute, ordinance or administrative regulation; or
> whether the conduct is of a continuing nature or has produced a permanent or long-lasting effect, and, as the actor knows or has reason to know, has a significant effect upon the public right.[37]

States began to use public nuisance law to address climate change in the 2000s. In *California v. General Motors Corporation*, the state of California sought damages, attorney's fees, and declaratory judgment against defendant-automakers for their contributions to global warming.[38] The suit was dismissed for raising a non-justiciable political question.[39]

In *American Electric Power Company v. Connecticut*, several states, New York City, and three private land trusts brought federal common-law public nuisance claims against four private power companies and the federal Tennessee Valley Authority.[40] Plaintiffs sought injunctive relief in the form of a carbon cap decree, a carbon emissions limit that would be reduced in each successive year.[41] The Supreme Court held that the federal Clean Air Act, and the EPA

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34. Oliver Milman, *'It's a Ghost Page': EPA Site's Climate Change Section May be Gone for Good*, GUARDIAN (Nov. 1, 2018), https://www.theguardian.com/us-news/2018/nov/01/epa-website-climate-change-trump-administration [https://perma.cc/8XE6-39TZ].

35. *Id.*

36. RESTATEMENT (SECOND) OF TORTS § 821(B)(2)(a)-(c) (1979).

37. *Id.*

38. Cal. v. Gen. Motors Corp., No. C06-05755 MJJ, 2007 U.S. Dist. LEXIS 68547, at *2–5 (N.D. Cal. Sept. 17, 2007).

39. *Id.* at *50.

40. Am. Elec. Power Co. v. Conn., 564 U.S. 410, 415 (2011).

41. *Id.* at 415.

actions it authorizes, federally displaced the claims.[42] However, the Court left open the possibility of a state nuisance suit.[43] In *Native Village of Kivalina v. ExxonMobil Corporation*, the Ninth Circuit Court of Appeals followed the Supreme Court's lead from *American Electric Power Company* in determining that common law public nuisance claims were displaced by federal law.[44]

With the question left open from *American Electric Power Company* about whether public nuisance claims could successfully be brought in state courts, recently, multiple cities and states have brought such public nuisance claims in state courts. The defendants, in turn, have attempted to move the cases to federal court, where the nuisance claims are less likely to succeed because of federal preemption or displacement.[45] Currently, cases are pending in New York City, Colorado, King County of Washington state, Baltimore, Rhode Island and municipalities in California.[46] Most recently, the Pacific Coast Federation of Fishermen's Associations, Inc. filed a lawsuit against 30 fossil fuel companies—the first time a private plaintiff in the U.S. has sued fossil fuel companies for damages caused by climate change.[47] Nonetheless, most of the plaintiffs have been initially unsuccessful in

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42. *Id.* at 424.

43. *Id.* at 429.

44. Native Vill. of Kivalina v. ExxonMobil Corp. 696 F.3d 849, 858 (2012), *cert denied*, 133 S. Ct. 2390 (2013). Unlike the plaintiffs in *American Electric Power Company* who sought injunctive relief, Kivalina sought damages. *Id.* at 853. Even so, the Ninth Circuit found that the Supreme Court in *American Electric Power Company* determined that federal common law addressing greenhouse gas emissions has been displaced by Congressional action, which effectively displaces federal common law public nuisance claims seeking damages and injunctive relief. *Id.* at 858.

45. David Hasemyer, *Fossil Fuels on Trial: Where the Major Climate Change Lawsuits Stand Today (2018)*, INSIDE CLIMATE NEWS (Nov. 6, 2018), https://insideclimatenews.org/news/04042018/climate-change-fossil-fuel-company-lawsuits-timeline-exxon-children-california-cities-attorney-general [https://perma.cc/C9YQ-S2LF].

46. *See* Sabin Center for Climate Change Law, U.S. Litigation Chart http://climatecasechart.com/case-category/common-law-claims/ [https://perma.cc/QVU7-72PF] (tracking each of the public nuisance suits).

47. Complaint & Jury Trial Demand, Pacific Coast Federation of Fishermen's Associations, Inc. v. Chevron, No. CGC-18-571285 (S.F. Cty. Super. Ct. Nov. 14, 2018); *see* Michael Hirsh, *How Private Lawsuits Could Save the Climate*, FOREIGN POLICY (Nov. 21, 2018), https://foreignpolicy.com/2018/11/21/how-private-lawsuits-could-save-the-climate/ [https://perma.cc/WS3B-V3GW].

their efforts because their claims have either been dismissed and are pending appeal[48] or been stayed.[49]

On the other hand, the lawsuits furthest along are located in California, Baltimore, Rhode Island, and Colorado after having been first removed to federal court and subsequently remanded to state court.[50] In response, defendants in the California and Baltimore lawsuits filed a notice of appeal and were subsequently granted a stay

48. City of New York v. BP P.L.C. 325 F. Supp. 3d 466, 475–78 (S.D.N.Y. 2018); City of Oakland v. BP P.L.C., 325 F. Supp. 3d 1017, 1024 (N.D. Cal. 2018) (dismissing lawsuits by Oakland and San Francisco). Lawsuits brought by the City of Oakland, the City of San Francisco, and the City of New York, for example, were dismissed. Courts found that the nuisance claims arose under federal law rather than state common law, and that such climate change issues were better suited for the legislative and executive branches rather than the judicial branch. Order Granting Motion to Dismiss Amended Complaints, City of Oakland v. BP P.L.C., No. C-17-06011 WHA and No. C-17-06012 WHA (N.D. Cal. June 25, 2018); Order Granting Motion to Dismiss for Lack of Personal Jurisdiction, City of Oakland v. BP P.L.C., No. C-17-06011 WHA and No. C-17-06012 WHA (N.D. Cal. July 27, 2018). Further, a California district court concluded it had no personal jurisdiction over four of the five defendants who were not residents of California. Order Granting Motion to Dismiss Amended Complaints, City of Oakland v. BP P.L.C., No. C-17-06011 WHA and No. C-17-06012 WHA (N.D. Cal. June 25, 2018); Order Granting Motion to Dismiss for Lack of Personal Jurisdiction, City of Oakland v. BP P.L.C., No. C-17-06011 WHA and No. C-17-06012 WHA (N.D. Cal. July 27, 2018). Similarly, the lawsuit brought by the City of New York was dismissed because the Court found that federal common law displaced the city's state law claims, the Clean Air Act displaced the City's claims, and the City's claims interfered with separation of powers and foreign policy. Opinion and Order, City of New York v. BP P.L.C., No. 18-Civ.-182 (S.D.N.Y. July 19, 2018).

49. Order Granting Partially Unopposed Motion to Stay Proceedings, King County v. BP P.L.C., No. C18-758-RSL, (W.D. Wash. Oct. 17, 2018) (staying proceedings pending the Ninth Circuit's decision in San Francisco's and Oakland's appeals of the dismissal of their similar lawsuits).

50. Cty. of San Mateo v. Chevron Corp., 294 F. Supp. 3d 934, 937 (N.D. Cal. 2018); Mayor & Balt. v. BP P.L.C., Civil Action No. ELH-18-2357, 2019 U.S. Dist. LEXIS 103938 (D. Md. June 20, 2019); Rhode Island v. Chevron Corp., No. 18-395 WES, 2019 U.S. Dist. LEXIS 121349, at *6 (D.R.I. July 22, 2019); Order, Comm'r of Boulder Cty. v. Suncor Energy (U.S.A.), Inc., No. 18-cv-01672-WJM-SKC (Colo. Dist. Ct. Sept. 5, 2019).

pending appeal.[51] Most recently, in the Baltimore[52] and Rhode Island[53] cases, the U.S. Supreme Court denied fossil fuel companies' applications for a stay pending appeal. Defendants' application for recall of the remand order in the Boulder County, Colorado case was also denied.[54]

If plaintiffs can overcome the obstacles they face in surpassing numerous threshold issues, they have the chance to move forward with litigation. Overall, though, as evidenced by *American Electric Power Company*, *Kivalina,* and the pending cases, it is difficult for plaintiffs to avoid dismissal and to remain in state court. Current plaintiffs continue to struggle with threshold issues such as political question, standing, preemption, and displacement, among several other obstacles in public nuisance litigation.[55]

If climate plaintiffs can successfully proceed and either settle with the defendants or obtain the relief they pray for, the question then becomes how such energy producer-defendants would begin to pay these damages without further harming the environment. The next section evaluates climate plaintiffs' asserted monetary damages, defendants' assets, and the unintended consequences plaintiffs will face if courts order defendants to pay large monetary damages.

II. CLIMATE PLAINTIFFS' REQUESTED MONETARY DAMAGES WILL LEAD TO MORE HARM THAN GOOD

Part II.A of this section analyzes the amounts claimed by current plaintiffs in climate nuisance litigation that, when combined, reach almost two hundred billion dollars. Part II.B examines how defendants' assets are not sufficient to meet plaintiffs' requested damages. In fact, defendants attempting to pay a court-determined

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51. Defendants' Motion to Stay Pending Appeal of Remand Order; Memorandum of Points and Authorities, Cty. of San Mateo v. Chevron Corp., No. 3:17-4929-VC (N.D. Cal. 2018); Order Granting Motions to Stay, Cty. of San Mateo v. Chevron Corp., No. 17-cv-04935-VC (N.D. Cal. 2018).

52. Sabin Center for Climate Change Law, U.S. Litigation Chart http://climatecasechart.com/case/mayor-city-council-of-baltimore-v-bp-plc/ [https://perma.cc/FK2K-KDSM].

53. Sabin Center for Climate Change Law, U.S. Litigation Chart http://climatecasechart.com/case/rhode-island-v-chevron-corp/ [https://perma.cc/QQP5-2HEK].

54. Sabin Center for Climate Change Law, U.S. Litigation Chart http://climatecasechart.com/case/board-of-county-commissioners-of-boulder-county-v-suncor-energy-usa-inc/ [https://perma.cc/DU6G-4ZLU].

55. Gerrard, *supra* note 1, at 12.

judgment in the range of hundreds of billions of dollars may actually exacerbate climate change and exceed the carbon budget. Part II.C examines the consequences if oil and gas companies are compelled to file for bankruptcy.

A. Plaintiffs Claim Approximately Two Hundred Billion Dollars in Monetary Damages

Generally, city and state plaintiffs are seeking "compensatory damages in an amount according to proof," for past, current, and future costs incurred to protect the infrastructure, property, public health, and safety of their residents from the impacts of climate change.[56] Local governments in California and the state of Rhode Island are also requesting disgorgement of defendants' profits and punitive damages.[57] Overall, climate plaintiffs are seeking damages that will prove to be extremely costly for defendants if they are held liable and a court awards large monetary damages.

If granted, the monetary damages requested could cost defendants almost two hundred billion dollars.[58] While the specific monetary damages will be determined using proof from the discovery stage of litigation and the court will ultimately decide the value, each of the plaintiffs in their complaints described past injuries and future projects for which they request monetary relief. In the City of New York's complaint, for example, it noted that it will be spending billions of dollars on its resiliency measures.[59] In the aftermath of Hurricane Sandy, New York City created a $20 billion investment program for climate resiliency.[60] For example, the East Side Coastal Resiliency Project, designed to protect neighborhoods from flooding caused by

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56. *See, e.g.*, Complaint at 63, City of New York v. BP P.L.C., No. 18 cv 182 (S.D.N.Y. Jan. 9, 2018); *see also* Complaint at 140, Rhode Island v. Chevron Corp., No. PC-2018-4716 (R.I. Super. Ct. July 2, 2018).

57. Complaint at 95, City of Imperial Beach v. Chevron Corp., No. C17-01227 (Cal. Super. Ct. July 17, 2017); Complaint at 98, Cty. of San Mateo v. Chevron Corp., No. 17CIV032222 (Cal. Super. Ct. July 17, 2017); Complaint at 99, Cty. of Marin v. Chevron Corp., No. CIV1702586 (Cal. Super. Ct. July 17, 2017); Complaint at 123, Cty. Santa Cruz v. Chevron Corp., No. 17CV03242 (Cal. Super. Ct. Dec. 20, 2017); Complaint at 140, Rhode Island v. Chevron Corp., No. PC-2018-4716 (R.I. Super. Ct. July 2, 2018).

58. This value is based on the sum of damages requested in each of the complaints analyzed.

59. Complaint at 6, City of New York v. BP P.L.C., No. 18-cv-182 (S.D.N.Y. Jan. 9, 2018).

60. *Id.* at 53.

coastal storms and rise of sea level, is estimated to cost $760 million.[61] The City is also working on the Two Bridge Project, which will serve as a barrier to protect the Brooklyn Bridge and is estimated to cost $203 million.[62] The Raised Shorelines Program, which will protect low-lying areas throughout the City, is budgeted at $100 million.[63] Additional City projects designed to ensure the health care system is prepared for the effects of climate change total approximately $200 million.[64]Many of these City projects are not yet fully funded.[65]

The City of Imperial Beach, California, alleges that the costs associated with addressing sea level rise caused by defendants are projected to cost "billions of dollars over the next several decades."[66] For example, the City notes that "economic vulnerability associated with erosion's impact on real property is valued at over $106 million."[67] Coastal flooding is expected to cost over $38 million in damages.[68] The damage caused by regular tidal inundation is anticipated to cost more than $34 million.[69]

The County of San Mateo, California, asserts that it has "incurred millions of dollars of expenses" in preparing for damages caused by sea level rise.[70] According to a Sea Level Vulnerability Assessment conducted in 2017, parcels of real property valued at a total of $23 billion on San Francisco Bay shoreline will be threatened by inundation, and will need $910 million of infrastructure repair on its ocean coastline.[71]

In its complaint, the County of Santa Cruz, California estimates that 0.3 feet of sea level rise and 5.2 feet of sea level rise will put approximately $742 million and $2.15 billion worth of assets at-risk, respectively.[72] Additionally, the County estimates that it will lose part of its hundreds of millions of dollars of revenue from tourism due

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61. *Id.*
62. *Id.* at 53–54.
63. *Id.* at 54.
64. *Id.*
65. *Id.*
66. Complaint at 80, City of Imperial Beach v. Chevron Corp., No. C17-01227 (Cal. Super. Ct. July 17, 2017).
67. *Id.* at 72.
68. *Id.* at 72.
69. *Id.* at 72–73.
70. Complaint at 77, Cty. San Mateo v. Chevron Corp., No. 17CIV032222 (Cal. Super. Ct. July 17, 2017).
71. *Id.*
72. Complaint at 85–86, Cty. Santa Cruz v. Chevron Corp., No. 17CV03242 (Cal. Super. Ct. Dec. 20, 2017).

to the continued erosion and inundation of its beaches and other damages to its tourist attractions.[73] The County has already spent millions of dollars repairing approximately 230 roads that had been destroyed or considered impassable by intense storms.[74] Further, the County estimates that the Critical Fire Hazard Areas of the County require over a billion dollars' worth of improvements.[75]

The City of Boulder, Colorado, anticipates property damage compensation in the billions as well. The Board of County Commissioners of Boulder County, Colorado, unlike the other plaintiffs, provided a lengthy list of specific costs for which it is seeking monetary relief in its complaint.[76] In 2010, for example, the Fourmile Canyon fire caused damages that totaled hundreds of millions of dollars, "making it the most expensive fire in Colorado's history at the

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73. *Id.* at 90.

74. *Id.* at 95.

75. *Id.* at 93.

76. The Complaint states, "[t]hese costs include, but are not limited to" the following:

> costs to analyze and evaluate the future impacts of climate alteration, the response to such impacts and the costs of mitigating, adapting to, or remediating those impacts; costs associated with wildfire response, management, and mitigation; costs of responding to, managing, and repairing damage from pine beetle and other pest infestations; costs associated with increased drought conditions including alternate planting and increased landscape maintenance costs; costs associated with additional medical treatment and hospital visits necessitated by extreme heat events, increased allergen exposure and exposure to vector-borne disease, as well as mitigation measures and public education programs to reduce the occurrence of such health impacts; costs associated with repairing and replacing existing flood control and drainage measures, and repairing flood damage; costs of repair, maintenance, mitigation and rebuilding and replacement of road systems to respond to the impacts of climate alteration; costs associated with alteration and repair of bridge structures to retain safety due to increases in stream flow rates; repair of physical damage to buildings owned by Plaintiffs; costs of analysis of alternative building design and construction and costs to implement such alternative design and construction; loss of income from property owned by Plaintiffs due to reduced agricultural productivity or lease or rental income while property is unusable; the cost of public education programs concerning responses to climate alteration; the cost of reduced employee productivity.

Complaint and Jury Demand at 103–04, Bd. of Cty. Comm'r of Boulder Cty. v. Suncor Energy (U.S.A.), Inc., No. 2018cv030349 (Colo. Dist. Ct. Apr. 17, 2018).

time."[77] In 2013, after receiving nearly a year's worth of rain in eight days, the City of Boulder faced over $2 billion in property damage across the Front Range.[78] In Boulder County alone, the rain "destroyed or damaged more than 150 miles of roads and 30 bridges at a cost well in excess of $100 million."[79] In that year alone, municipal property damage in the City of Boulder totaled $27 million.[80] In response, the County oversaw a flood-damaged property buyout program that cost $24.6 million.[81]

Rhode Island expects that by the end of the century, 6,660 Rhode Island coastal properties, worth approximately $3.6 billion, will be at risk in a high-sea level rise scenario, reducing property tax revenue by $47.8 million.[82] Rhode Island's commercial fishing industry, which generates approximately $200 million in annual sales and supports about 7,000 jobs, will be threatened by anticipated flooding from major storms.[83]

According to the initial complaint, projected sea level rise in Oakland, California, puts at risk property with a total replacement cost between $22 and $38 billion.[84] Oakland has planned to improve its airport for flood protection infrastructure, including the Old Earhart Road Floodwall Improvement, estimated to cost $800,000, and improvements to the existing, 4.5-mile Airport Perimeter Dike, estimated to cost $55 million.[85] Oakland also expects to complete a $2 million Sea Level Vulnerability and Assessment Improvement Plan for the Port of Oakland, and is working with the San Francisco Bay Conservation and Development Commission on a regional study of sea level rise risk.[86]

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77. Complaint at 44, Bd. of Cty. Comm'r of Boulder Cty. v. Suncor Energy (U.S.A.), Inc., No. 2018cv030349 (Colo. Dist. Ct. Apr. 17, 2018).

78. *Id.*

79. *Id.*

80. *Id.*

81. *Id.*

82. Complaint at 101, Rhode Island v. Chevron Corp., No. PC-2018-4716 (R.I. Super. Ct. July 2, 2018) (citing UNION OF CONCERNED SCIENTISTS, *UNDERWATER*: RISING SEAS, CHRONIC FLOODS, AND THE IMPLICATIONS FOR US COASTAL REAL ESTATE (2018) (providing underwater state-level data by year and scenario)).

83. Complaint at 105–6, Rhode Island v. Chevron Corp., No. PC-2018-4716 (R.I. Super. Ct. July 2, 2018).

84. Complaint at 14, City of Oakland v. BP P.L.C., No. RG17875889 (N.D. Cal. Sep. 19, 2017).

85. *Id.* at 35.

86. *Id.*

The City of San Francisco similarly identified specific damages in its complaint.[87] In order to improve the city's resiliency, San Francisco has set forth an adaptation plan which will attempt to prevent putting $10 billion dollars of public property and $39 billion dollars of private property at risk.[88] In 2016, the mayor of San Francisco announced an initial investment of $8 million to fortify the Seawall.[89] Short-term seawall upgrades are estimated to cost more than $500 million and long-term upgrades are anticipated to cost $5 billion.[90]

In its complaint, King County of Washington State estimates that it will require "hundreds of millions in expenditures to abate the global warming nuisance."[91] The complaint did not breakdown most of its damages in monetary terms, however, it discussed the potential monetary cost of severe storms and flood disasters.[92] Specifically, it noted that King County is estimated to incur a 10% rate increase (about $450,000) in additional insurance premium in 2018-19 as a result of extreme U.S. weather-related disasters in 2017.[93]

In total, based on these complaints, climate plaintiffs are seeking almost two hundred billion dollars that they claim energy producer-defendants imposed on the public through their massive fossil fuel production.[94] However, if plaintiffs manage to win their lawsuits, obtaining monetary damages in the range of hundreds of

87. Complaint at 4, People of the State of California (San Francisco) v. BP P.L.C. et al., CGC-17-561370, (Super. Ct. Sep. 19, 2017).

88. *Id.*

89. *Id.* at 34.

90. *Id.*

91. Complaint at 55, King County v. BP P.L.C. et al., 18-2-11859-0 (Wash. Super. Ct. May 9, 2018).

92. *Id.* at 63.

93. *Id.* at 64.

94. The fishermen's complaint does not claim harm in monetary value. Complaint & Jury Trial Demand at 4, Pacific Coast Federation of Fishermen's Associations, Inc. v. Chevron, No. CGC-18-571285 (S.F. Cty. Super. Ct. Nov. 14, 2018). Instead, the complaint describes how the State of California had to delay the opening of the Dungeness crab season in order to avoid poisoning humans with domoic acid, which is found in crab flesh and caused by *Pseudo-nitzschia* blooms as a result of rising ocean temperatures. *Id.* at 4. Because of this change in the environment, fisheries have been forced to close down. *Id.* at 4. Plaintiffs explicitly claim damages beyond economic harms including "loss of the iconic west coast commercial fishing lifestyle, loss of a regional commercial fishing culture and identity, and loss of public confidence in the safety and quality of west coast Dungeness crab products and the fishery itself." *Id.* at 76.

billions of dollars will negatively impact the parties to the suits and the environment.

B. Selling or Using Defendants' Assets Will Not Meet the Requested Monetary Damages and May Exacerbate Climate Change

If plaintiffs overcome their challenging threshold issues, and judges ultimately award monetary damages in the range of hundreds of billions of dollars, serious negative consequences will unfold. The table below helps illustrate why defendants would be unable to pay damages using their assets, and why plaintiffs may not even want them to do so.[95]

Values of Certain Assets of Fossil Fuel Companies Based on 2017 Financial Statements (in millions $)			
	Chevron[96]	Exxon Mobil[97]	ConocoPhillips[98]
Cash and Cash Equivalents	$4,183	$3,177	$6,325
Accounts and Notes Receivable	$15,353	$25,597	$4,179
Prepaid Expenses and other current assets	$2,800	$1,368	$1,035
Inventories of crude oil and petroleum products	$3,142 + $1,967 + $476* totaling $5,585 *Chemicals	$12,871 + $4,121 totaling $17,053	$1,060 (includes materials and supplies)

95. Chevron, Exxon Mobil, and ConocoPhillips were chosen for the analysis as they are some of the primary climate defendants in the pending cases.

96. Chevron Corp., Annual Report (Form 10-K) 54 (Feb. 22, 2018).

97. Exxon Mobil Corp., Annual Report (Form 10-K) 30 (Feb. 28, 2018).

98. ConocoPhillips, Annual Report (Form 10-K) 29 (Feb. 20, 2018).

+ Materials and supplies			
Properties, plant, and equipment, net (PP&E)	$177,712	$252, 630	$45, 683
Discounted Future Net Cash Flows from Proved Oil and Gas Reserves	$80,013	$90,204	$25,004

First, the principal assets of defendant corporations are associated with fossil fuels and reserves that should be left in the ground in order to limit global warming to the 2ºC threshold. Defendants do not maintain enough cash flow in a year to pay large monetary damages. Based on the table above, only the "cash and cash equivalents," "accounts and notes receivable," and "prepaid expenses and other current assets" could be used or sold by fossil fuel companies to pay monetary damages without further impairing the environment. Such cash and short-term assets total approximately $22 billion for Chevron, $30 billion for Exxon Mobil, and $11 billion for ConocoPhillips. These assets will not nearly be enough to pay for the monetary relief plaintiffs seek. For comparison, in 2013, the City of Boulder, Colorado alone incurred over $2 billion in property damage after receiving nearly a year's worth of rain in just eight days.[99] Moreover, at this point in litigation, it is unclear whether defendants would be held jointly and severally liable. If they were found to be jointly and severally liable, then each party would be independently liable for the full extent of the injuries. Overall, to pay such large monetary damages, defendants would additionally need to extract oil and gas resources, further contributing to rise in sea level, CO_2, global mean surface temperature, and intensified health issues. These fossil

99. Complaint at 44, Bd. of Cty. Comm'r of Boulder Cty. v. Suncor Energy (U.S.A.), Inc., No. 2018cv030349 (Colo. Dist. Ct. Apr. 17, 2018).

fuels cannot be burned if the global temperature is to stay below the 2ºC threshold.

Second, if defendants sold their assets to pay the monetary awards, they would likely sell them to other oil and gas companies whose fossil fuel products would similarly emit harmful greenhouse gases. Based on the table above, putting aside defendants' cash and short-term assets, the rest of their value represent reserves and the property, plant and equipment (PP&E) put in place to extract those reserves. Yet, selling such assets, whose purpose is to extract, process, and transport fossil fuels, would prevent these companies from being able to conduct their primary business and would support other companies' contributions to global warming. Therefore, if held liable and required to pay court-determined damages worth almost two hundred billion dollars, defendant corporations could face bankruptcy.

Notably, the requested monetary relief only includes calculations of damages based on complaints by current plaintiffs in climate nuisance suits. These lawsuits have not yet reached the discovery stage where even more economic losses may be revealed. Moreover, plaintiffs may attempt to recover monetarily for more abstract losses such as loss to the community, loss of biodiversity and other ecological impacts, as well as losses that are inevitable but that will not occur for generations.[100] Perhaps most importantly, if any one of these plaintiffs win their lawsuits, large numbers of similar lawsuits will likely be filed by many other plaintiffs, multiplying the potential damage awards by unknown but extremely large numbers.

C. If Faced with Large Monetary Damages Defendants May File for Bankruptcy Similar to Asbestos Companies

If plaintiffs win their lawsuits and are awarded large monetary damages and equitable relief in the form of abatement of the nuisance,[101] defendants may be compelled to file for bankruptcy. The bankruptcy court will either try to reorganize the company through Chapter 11 of the United States Bankruptcy Code (USBC) or liquidate it in order to pay debtors through Chapter 7 of the USBC.

Defendants may file for Chapter 11 bankruptcy protection pursuant to the USBC. This was an approach that larger asbestos-supplying companies took when they faced legal liability from victims

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100. Gerrard, *supra* note 1, at 13.

101. Complaint at 140, Rhode Island v. Chevron Corp., No. PC-2018-4716 (R.I. Super. Ct. July 2, 2018).

who developed asbestos-caused diseases.[102] Asbestos victims requested compensation claims for medical costs, lost income, specialized living equipment, and personal injury damages for pain and suffering.[103] Filing for Chapter 11 bankruptcy protection halted the ongoing lawsuits and gave the asbestos-supplying companies time to restructure in order to eventually negotiate settlements while they carried on their business.[104] The financially-sound businesses ended up funding specialized trust accounts for present and future settlements.[105] As a result, "asbestos-supplying companies were no longer liable for damages, nor open to future lawsuits."[106] In exchange

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102. *Asbestos Trust Funds Companies List*, MESOTHELIOMA JUST. NETWORK, https://www.asbestos.net/legal/asbestos-trust-funds/list-of-companies/[https://perma.cc/BVS8-AVG5]. Many firms filed for bankruptcy because of the costs of asbestos litigation at the time and the likelihood of future costs. Between 1976 (the year of the first asbestos-related bankruptcy filing) and 2004, at least 73 firms that had been named defendants on a substantial number of asbestos claims filed for bankruptcy. STEPHEN J. CARROLL ET AL., RAND INST. FOR CIVIL JUST., ASBESTOS LITIGATION xxvii (2005).

103. *Asbestos Trust Funds Companies List*, *supra* note 102; *see also* CARROLL ET AL., *supra* note 102, at xxvi (estimating that claimants' net compensation from the 1960s through 2002 totaled about $30 billion); Geoffrey Tweedale & Richard Warren, *Chapter 11 and Asbestos: Encouraging Private Enterprise or Conspiring to Avoid Liability?* 55 J. BUS. ETHICS 31, 34 (2004) (noting that over half a million cases had been filed by 2001 and that the American personal-injury awards reached millions of dollars).

104. *Asbestos Trust Funds Companies List*, *supra* note 102.

105. *Id.*

106. *Id.* In 1988, two trust funds were created in bankruptcy court in a case against the Johns-Manville corporation, but the court's ultimate ruling barred hundreds of thousands of future claimants from their day in court. MICHAEL BOWKER, FATAL DECEPTION: THE UNTOLD STORY OF ASBESTOS: WHY IT IS STILL LEGAL AND STILL KILLING US 266, 266 (Rodale Press eds., 2003). "The company had gotten what it wanted most—the elimination of future jury awards and a minimal payout required on all future claims." *Id.* In 1994, Congress enacted Section 524(g) that established a mechanism by which companies can curtail both current asbestos claims and future asbestos claims, meaning, "the potential claims of unidentified persons who were exposed to asbestos pre-petition but who have not yet developed any asbestos-related condition." Mark D. Plevin et al., *The Future Claims Representative in Prepackaged Asbestos Bankruptcies: Conflicts of Interest, Strange Alliances and Unfamiliar Duties for Burdened Bankruptcy Courts*, 62 NYU ANN. SURV. A.L. 271, 271 (2006). Section 524(g) allows the bankruptcy court to preclude future claimants from filing asbestos-related claims against the company in the tort system. *Id.* Instead, the future claimants only have the option of filing a claim with a trust organized in relation to the bankruptcy. *Id.*

for funding trusts, the asbestos-supplying companies were effectively "shielded against all current and future asbestos-related liability."[107]

If climate nuisance plaintiffs manage to win their lawsuits and are granted compensatory damages, punitive damages, or disgorgement of profits in the range of hundreds of billions of dollars, then oil and gas companies may file for Chapter 11 protection. By funding trusts accounts, the reorganized oil and gas companies would be protected from current and future climate nuisance-related liability.

Similar to the outcome of certain asbestos companies, fossil fuel companies might be forced to file for Chapter 7 liquidation if they

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107. LLOYD DIXON ET AL., RAND INST. FOR CIV. JUST., ASBESTOS BANKRUPTCY TRUSTS: AN OVERVIEW OF TRUST STRUCTURE AND ACTIVITY WITH DETAILED REPORTS ON THE LARGEST TRUSTS 3 (2010). However, in asbestos matters, trusts are generally not funded at levels that allow for total payment of the estimated amount the plaintiff would have received had the defendant not become insolvent. LLOYD DIXON & GEOFFREY MCGOVERN, RAND INST. FOR CIV. JUST., INTRODUCTION AND BACKGROUND ON ASBESTOS BANKRUPTCIES in BANKRUPTCY'S EFFECT ON PRODUCT IDENTIFICATION IN ASBESTOS PERSONAL INJURY CASES 4 (2015); *see also* CARROLL ET AL., *supra* note 102, at 129 ("It is certain that many of the asbestos personal injury trusts established as a result of Chapter 11 bankruptcy reorganizations pay only a small fraction of the agreed-upon value of plaintiffs' claims[.]"). Moreover, "[m]ost trusts do not have sufficient funds to pay in full and, thus, set a payment percentage that is used to determine the actual payment a claimant will be offered." LLOYD DIXON ET AL., RAND INST. FOR CIV. JUST., ASBESTOS BANKRUPTCY TRUSTS: AN OVERVIEW OF TRUST STRUCTURE AND ACTIVITY WITH DETAILED REPORTS ON THE LARGEST TRUSTS xv (2010). According to their study, the 26 largest trusts offered to pay 1.1% to 100% of a claim amount, but in 2010 the median percentage was to pay 25%. *Id.* at xv. As a result, some trusts are funded such that they cannot pay the full portion assigned to the claim, whereas others can pay the entire amount assigned to the claim. *Id.* at xv. Thus, it is possible that "a plaintiff can receive less from a trust than if he or she had sued the predecessor company prior to its bankruptcy." LLOYD DIXON & GEOFFREY MCGOVERN, FOR CIV. JUST, INTRODUCTION AND BACKGROUND ON ASBESTOS BANKRUPTCIES in BANKRUPTCY'S EFFECT ON PRODUCT IDENTIFICATION IN ASBESTOS PERSONAL INJURY CASES 3–4 (2015). Climate nuisance plaintiffs including the County of Marin, the County of San Mateo, and the City of Imperial Beach explained that they sought "to ensure that the parties responsible for sea level rise bear the costs of its impacts on the County, rather than Plaintiffs, local taxpayers or residents." Complaint at 4, Cty. of Marin v. Chevron Corp., No. CIV1702586 (Cal. Super. Ct. July 17, 2017; *see also* Complaint at 4, City of Imperial Beach v. Chevron Corp., Case No. C17-01227 (Cal. Super. Ct. 2017), Complaint at 4, Cty. San Mateo v. Chevron Corp., No. 17CIV032222 (Cal. Super. Ct. July 17, 2017). If fossil fuel companies file for Chapter 11 bankruptcy protection, it is not clear they would be bearing all of the costs. Moreover, plaintiffs may not receive an amount of money that sufficiently meets their needs. Therefore, there are adverse consequences to climate plaintiffs if defendant oil and gas companies file for Chapter 11 bankruptcy protection.

cannot pay the lawsuit awards. In a Chapter 7 liquidation, a bankruptcy trustee is tasked with selling the debtor's assets and using the proceeds to pay creditors in accordance with the provisions of the Bankruptcy Code.[108] When a company files a petition under Chapter 7, this action automatically stays most collections against the debtor.[109] While a stay is in effect, creditors generally cannot initiate or continue lawsuits."[110]

However, filing for bankruptcy either through Chapter 11 reorganization or Chapter 7 liquidation will result in adverse consequences for parties involved and the environment. First, bankruptcy would almost certainly involve a sale of the company or its assets[111] to an entity that wants to buy and sell the oil and gas—e.g., Saudi Aramco, Rosneft, or China Petroleum & Chemical Corp.[112] This

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108. 11 U.S.C. §§ 704–766 (1982 & Supp. II 1984).

109. United States Courts, Chapter 7—Bankruptcy Basics, https://www.uscourts.gov/services-forms/bankruptcy/bankruptcy-basics/chapter-7-bankruptcy-basics [https://perma.cc/2SF2-RZJS] (citing 11 U.S.C. § 362 (2012)).

110. *Id.*

111. The assets of oil and gas companies are divided into three types: downstream, upstream, and midstream. The primary upstream assets consist of oil and gas reserves in the ground. In the United States, oil and gas mineral rights are considered upstream assets, which can be traded. Midstream assets primarily include the initial processing, storage, and transportation facilities. The initial processing tends to involve the stripping out of natural gas from crude oil plants near the oil field. Transportation facilities include pipelines, trucks, barges and tankers carrying crude oil and gas from producing fields and initial processing plants to oil refineries. Finally, downstream assets are oil refineries and associated storage facilities for refined products as well as the refined product distribution and marketing networks. Such networks include pipelines, trucks, tankers, or barges that carry the refined products and the retail network of gas stations where they are ultimately sold to consumers. Many oil companies also have gas assets. These include gas liquefaction plants, natural gas pipelines and gas distribution pipelines to domestic, commercial and industrial end users. Maria Kielmas, *What Kinds of Assets Do Oil Companies Have?* AZ CENTRAL, https://yourbusiness.azcentral.com/kind-assets-oil-companies-have-6114.html [https://perma.cc/YRF8-S6H2].

112. Under Chapter 11, a bankruptcy court approving the sale of a debtor's assets is to consider "if all the provisions of § 363 are followed, the bid is fair, and the sale is in the best interests of the estate and its creditors." In re Quality Stores, Inc. 272 B.R. 643, 647 (Bankr. W.D. Mich. 2002). Moreover, "[i]n evaluating whether a sound business judgment justifies the use, sale or lease of property under Section 363(b), courts consider a variety of factors, which essentially represent a 'business judgment test.'" In re Montgomery Ward Holding Corp., 242 B.R. 147, 153 (D. Del. 1999) (citing Collier on Bankruptcy § 363.02 (15th ed. 1997)). While this is a fairly deferential standard, perhaps a bankruptcy court could condition the sale on a requirement that the oil and gas not be extracted and burned. Of course, if such a condition is imposed, no one would buy.

is an undesired result, as it would simply transfer the ownership of the oil and gas assets to other companies who are not parties to the lawsuits and whose actions will continue to exacerbate climate change.

Additionally, purchasing oil and gas companies could be held liable under the successor liability theory. Section 363 of the Bankruptcy Code controls when a debtor seeks to sell its assets.[113] Reorganization under Chapter 11 can be a lengthy process, so when large debtor corporations face financial uncertainty and lack capital, they can turn to sales pursuant to Section 363 for quick cash to pay their creditors.[114] Typically, selling assets to another corporation does not impose liability upon the successor corporation for actions of the seller.[115] There are, however, four exceptions to successor nonliability. These include if the acquisition:

> is accompanied by an agreement for the successor to assume such liability; or results from a fraudulent conveyance to escape liability for the debts or liabilities of the predecessor; or constitutes a consolidation or merger with the predecessor; or results in the successor becoming a continuation of the predecessor.[116]

Selling parties will need to ensure that they sell "free and clear" of successor liability.[117] In *Elliot v. GM LLC (In re Motors Liquidation Co.)*, creditors alleging ignition switch defects in certain models of GM vehicles brought claims against "New GM"—which had emerged after "Old GM" petitioned for Chapter 11 bankruptcy protection—under the theory of successor liability.[118] The Second Circuit found that independent claims relating only to New GM's conduct were based on New GM's post-petition conduct, and thus found these claims to be "outside the scope of the Sale Order's 'free and clear'

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113. 11 U.S.C. § 363 (2018).

114. Chelsea Donenfeld, *Successor Liability in the Bankruptcy Context: The Problem or the Solution?* 39 CARDOZO L. REV. 719, 728 (2017); *see* 11 U.S.C. § 363 (2018).

115. Michael H. Reed, *Successor Liability and Bankruptcy Sales*, 51 BUSINESS L. 653, 653 (1996); *see, e.g.*, Polius v. Clark Equipment Co., 802 F.2d 75, 77 (3d Cir. 1986) (finding that "under the well-settled rule of corporate law, where one company sells or transfers all of its assets to another, the second entity does not become liable for the debts and liabilities, including torts, of the transferor.") (citing 15 W. Fletcher, *Cyclopedia of the Law of Private Corporations*, § 7122 (Perm. Ed. 1983)).

116. RESTATEMENT (THIRD) OF TORTS: PRODUCT LIABILITY § 12 (2012).

117. 11 U.S.C. § 363 (2018).

118. Elliot v. GM LLC (In re Motors Liquidation Co.), 829 F.3d 135, 143 (2d Cir. 2016).

provision."[119] This meant that New GM could potentially be held liable for such claims.[120]

Therefore, corporations who purchase oil and gas from debtor defendants face the potential threat of being held liable for their actions through successor liability. As a result, perhaps they may be discouraged from purchasing or would purchase below the market-value.

This may inhibit defendant oil and gas corporations from being able to successfully sell their assets and further prevent plaintiffs from ultimately getting paid.

Perhaps the most important consequence for plaintiffs if defendants were to file for bankruptcy is that tort claimants are classified as unsecured creditors in the priority system for repayment of creditors.[121] In the process of dividing up and distributing the company's assets, secured creditors receive their payment before tort claimants.[122] A firm that has filed for bankruptcy "generally has debts that exceed the amount of its assets" and there are limited assets in the pool.[123] Consequently, "the firm's secured creditors usually receive full payments on their claims, while its unsecured creditors, including tort claimants, may receive only partial payment or no payment at all."[124]

Even if climate plaintiffs are unable to recover monetary relief because defendants file for bankruptcy, they still may benefit from a solution that would reduce the greenhouse gas emissions produced by climate defendants. Faced with the threat that defendants could sell their assets to other oil and gas companies whose actions would

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119. *Id.* at 157.

120. *Id.* at 158. For example, if claims involved misrepresentations by New GM as to the safety of Old GM cars, then New GM could be held liable. *Id.* at 157. Additionally, New GM could be held liable for claims made by purchasers of Old GM used cars from New GM. *Id.*

121. Donenfeld *supra* note 114, at 728; *see* 11 U.S.C. § 363 (2018).

122. Painter, *supra* note 7, at 1079.

123. *Id.* at 1049–50.

124. *Id.* at 1050. Notably, in a recent decision, the Supreme Court of Canada found that "when energy companies go bankrupt, the cleanup of their old oil and gas wells must take priority over paying off creditors." Emma McIntosh, *Supreme Court Canada Says Bankrupt Energy Companies Must Clean Up Old Oil and Gas Wells Before Paying Off Creditors*, STARMETRO CALGARY (Jan. 31, 2019), https://www.thestar.com/calgary/2019/01/31/supreme-court-of-canada-says-bankrupt-energy-companies-must-clean-up-old-oil-and-gas-wells-before-paying-off-creditors.html [https://perma.cc/5VDM-VL7B]. Perhaps bankruptcy courts in the U.S. could similarly prioritize payment to climate plaintiffs before secured creditors.

contribute to climate change, exacerbating the problems plaintiffs are seeking to abate, plaintiffs may be inclined to settle with the defendants in bankruptcy court. For instance, plaintiffs could agree to forgive the debts they are owed, and in turn, the fossil fuel companies could agree to a specific rapid transition to clean energy.

Overall, an attempt to pay large monetary damages may cause defendants to file for bankruptcy, which would exacerbate climate change and may not even ensure plaintiffs obtain the monetary relief they primarily seek.

III. ALTERNATIVE OUTCOME OF FORMING A MASTER SETTLEMENT AGREEMENT

The best outcome in climate nuisance litigation is not for plaintiffs to obtain a court-determined judgment for monetary damages. Section III.A argues that the parties could should form a Master Settlement Agreement (MSA) similar to the one that states entered into with tobacco industry companies, settling their Medicaid lawsuits in 1998.[125] Under the MSA, climate defendants would agree to increase their use of renewables, transition away from fossil fuels, and leave a certain agreed upon percentage of unburnable carbon in the ground. This settlement agreement would serve to rectify the harm caused by defendant oil and gas companies' continuing contributions to climate change and help limit warming below the 2ºC threshold.

A. The Tobacco Master Settlement Agreement Provides a Successful Blueprint for Resolving Large-Scale Claims

Prior to the 1990s, the tobacco industry prevailed in lawsuits brought by impaired or dying smokers and their family members.[126] Litigants increased their collective power in the 1990s when forty-six state attorneys general formed the largest class action lawsuit in U.S. history and sued the tobacco industry to recover the costs of caring for smokers.[127] Instead of arguing on behalf of injured individuals, the states advanced a unique legal argument where they sought damages for recovery of Medicaid costs due to the increased smoking-related

125. Sloan, *supra* note 8, at 356.

126. Walter J. Jones & Gerard A. Silvestri, *The Master Settlement Agreement and Its Impact on Tobacco Use 10 Years Later: Lessons for Physicians About Health Policy Making*, 137 CHEST 692, 693 (2010).

127. *Id.* Notably, climate plaintiffs have not filed class actions, so their suits' resolutions do not bind non-parties.

illnesses.[128] This is a similar approach to the one climate nuisance litigants are currently taking, where local municipality and state governments are seeking monetary relief for damages to their infrastructure and for subsidizing their adaptation projects.

To avoid possible bankruptcy, the tobacco industry ultimately agreed to the Master Settlement Agreement (MSA).[129] The forty-six states that were parties to the MSA agreed to abandon their pending individual and collective lawsuits against the tobacco industry.[130] In return, the tobacco industry implemented the following: a payout of $206 billion to the states over twenty-five years; a $1.5 billion payout over ten years to support state antismoking measures; a $250 million payment to fund research on reducing youth smoking; permanent limitations on cigarette advertising; a ban on the use of cartoon characters (such as Joe Camel) in advertising; a ban on cigarette "branded" merchandise; limits on tobacco industry sponsorship of sporting events (including the Virginia Slims tennis tournament); and the dissolution of the tobacco trade organization.[131]

If climate defendants are ultimately required by a court to pay hundreds of billions of dollars of monetary damages and perhaps even abate their nuisances, they may be forced to settle with plaintiffs. Similar to the tobacco MSA, oil and gas companies should settle by negotiating with plaintiffs to do the following: increase their research and development of renewable energy sources, increase their use of renewables at a certain agreed upon percentage each year, transition away from fossil fuels by a certain agreed upon percentage each year, and leave a certain agreed upon percentage of unburnable carbon in the ground.[132]

The MSA would benefit both parties and help prevent global warming from surpassing the 2ºC threshold. This type of settlement

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128. *Id.*

129. *Id.* at 692.

130. *Id.* Note that recipients of the funds had the freedom to spend the money as they saw fit. Sloan *supra* note 8, at 356.

131. Jones & Silvestri, *supra* note 126, at 698. According to a research paper assessing the impacts of the Master Settlement Agreement on the tobacco industry, the MSA did not significantly harm the tobacco companies involved. Indeed, "some features of the MSA appear to have increased the company value and profitability." Sloan, *supra* note 8, at 356. However, domestic consumption of cigarettes declined steeply, which "represents a success of the MSA." *Id.* at 359.

132. *See generally* STEFFEN, *supra* note 6, at 12 (discussing the "carbon budget approach" which tells us how much CO_2 we can "spend" and not exceed a two degree Celsius rise in global temperature).

would avoid the problems plaintiffs would face if defendants filed for bankruptcy. If plaintiffs were to forgive the debts they are owed by companies, it would also prevent the undesirable effects of selling oil and gas assets from defendants to other oil and gas companies who will emit harmful greenhouse gases. Perhaps most importantly, restricting the amount of fossil fuels that could be burned would help ensure the carbon budget is not exceeded and would put the world in a better position to limit global warming to 2ºC above pre-industrial levels.

Climate defendants would also benefit from forming a MSA with climate plaintiffs. In the MSA, plaintiffs would agree to drop their lawsuits and defendants would not need to pay monetary relief. As discussed in Part II, climate defendants do not have the cash flow to pay awards totaling approximately two hundred billion dollars without harming the environment. Moreover, an agreement between all states and climate defendants avoids the potential multiplying of similar lawsuits and their damage awards to unknown but extremely large numbers.

Most importantly, an agreement that restricts the burning of fossil fuels would help ensure the carbon budget is not exceeded and would help limit global warming below the 2ºC threshold.

CONCLUSION

Climate nuisance litigation is one way to hold fossil fuel companies accountable for their actions in contributing to the catastrophic impacts of climate change. Ultimately, however, the cost of global climate change is too large to be paid just by oil and gas companies. These companies are responsible for global emissions, and the amounts a few plaintiffs in the U.S. are requesting could bankrupt the defendants while only compensating a small portion of those affected, if at all. Preventing the disastrous effects of climate change requires a transition away from fossil fuels by its leading producers and their commitment to keep unburnable carbon in the ground. A Master Settlement Agreement between climate plaintiffs and defendants to climate nuisance litigation is a more practical outcome than a court-determined judgment awarding monetary relief in amounts impossible to pay without causing further harm to the environment.