IN THE SUPERIOR COURT OF THE STATE OF DELAWARE

STATE OF DELAWARE, *ex rel.* KATHLEEN JENNINGS, Attorney General of the State of Delaware,

Plaintiff,

v.

BP AMERICA INC., BP P.L.C., CHEVRON CORPORATION, CHEVRON U.S.A. INC., CONOCOPHILLIPS, CONOCOPHILLIPS COMPANY, PHILLIPS 66, PHILLIPS 66 COMPANY, EXXON MOBIL CORPORATION, EXXONMOBIL OIL CORPORATION, XTO ENERGY INC., HESS CORPORATION, MARATHON OIL CORPORATION, MARATHON OIL COMPANY, MARATHON PETROLEUM CORPORATION, MARATHON PETROLEUM COMPANY LP, SPEEDWAY LLC, MURPHY OIL CORPORATION, MURPHY USA INC., ROYAL DUTCH SHELL PLC, SHELL OIL COMPANY, CITGO PETROLEUM CORPORATION, TOTAL S.A., TOTAL SPECIALTIES USA INC., OCCIDENTAL PETROLEUM CORPORATION, DEVON ENERGY CORPORATION, APACHE CORPORATION, CNX RESOURCES CORPORATION, CONSOL ENERGY INC., OVINTIV, INC., and AMERICAN PETROLEUM INSTITUTE,

Defendants.

C.A. No. _____
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COMPLAINT

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I. INTRODUCTION

1. Defendants, major corporate members of the fossil fuel industry, have known for nearly half a century that unrestricted production and use of fossil fuel products create greenhouse gas pollution that warms the planet and changes our climate. Climate change will have and has already had devastating economic and public health impacts across the State of Delaware, and will disproportionately impact people of color and people living in poverty. Defendants have known for decades that climate change impacts could be catastrophic, and that only a narrow window existed to take action before the consequences would be irreversible. They have nevertheless engaged in a coordinated, multi-front effort to conceal and deny their own knowledge of those threats, to discredit the growing body of publicly available scientific evidence, and to persistently create doubt in the minds of customers, consumers, regulators, the media, journalists, teachers, and the public about the reality and consequences of the impacts of their fossil fuel products. This campaign was intended to, and did, target and influence the public and consumers, including in Delaware.

2. At the same time, Defendants have promoted and profited from a massive increase in the extraction, production, and consumption of oil, coal, and natural gas, which has in turn caused an enormous, foreseeable, and avoidable increase in global greenhouse gas pollution and a concomitant increase in the

concentration of greenhouse gases,[1] particularly carbon dioxide ("CO_2") and methane, in the Earth's atmosphere. Those disruptions of the Earth's otherwise balanced carbon cycle have substantially contributed to a wide range of dire climate-related effects, including, but not limited to, global atmospheric and ocean warming, ocean acidification, melting polar ice caps and glaciers, more extreme and volatile weather, drought, and sea level rise.

3. Plaintiff, the State of Delaware,[2] its departments and agencies, along with the State's residents, infrastructure, public and private lands, and natural resources, suffer the consequences of Defendants' campaign of deception.

4. Defendants are extractors, producers, refiners, manufacturers, distributors, promoters, marketers, and/or sellers of fossil fuel products, each of which contributed to deceiving the public and consumers, in and outside of Delaware, about the role of their products in causing the global climate crisis. Decades of scientific research has shown that pollution from Defendants' fossil fuel products plays a direct and substantial role in the unprecedented rise in emissions of

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[1] As used in this Complaint, the term "greenhouse gases" refers collectively to carbon dioxide, methane, and nitrous oxide. Where a cited source refers to a specific gas or gases, or when a process relates only to a specific gas or gases, this Complaint refers to each gas by name.

[2] In this Complaint, the terms "State" and "Plaintiff" refer to the State of Delaware, unless otherwise stated. The word "Delaware" refers to the area falling within Plaintiff's geographic boundaries, excluding federal land, unless otherwise stated.

greenhouse gas pollution and increased atmospheric CO_2 concentrations that have occurred since the mid-20th century. This dramatic increase in atmospheric CO_2 and other greenhouse gases is the main driver of the gravely dangerous changes occurring to the global climate.

5. Anthropogenic greenhouse gas pollution, primarily in the form of CO_2, is far and away the dominant cause of global warming,[3] resulting in severe impacts including, but not limited to: sea level rise, disruption to the hydrologic cycle, more frequent and intense extreme precipitation events and associated flooding, more frequent and intense heatwaves, more frequent and intense droughts, and associated consequences of those physical and environmental changes. These impacts, the consequences of Defendants' actions, disproportionately impact communities of color and low-income communities in Delaware. The primary cause of the climate crisis is the combustion of coal, oil, and natural gas,[4] referred to collectively in this Complaint as "fossil fuel products."

6. The rate at which Defendants have extracted and sold fossil fuel products has exploded since the Second World War, as have emissions from those

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[3] *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE ("IPCC"), CLIMATE CHANGE 2014 SYNTHESIS REPORT (2014), https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf.

[4] *See* Pierre Friedlingstein et al., *Global Carbon Budget 2019*, 11 EARTH SYST. SCI. DATA 1783 (2019), https://www.earth-syst-sci-data.net/11/1783/2019.

products. The substantial majority of all anthropogenic greenhouse gas emissions in history have occurred since the 1950s, a period known as the "Great Acceleration."[5] About three-quarters of all industrial CO_2 emissions in history have occurred since the 1960s,[6] and more than half have occurred since the late 1980s.[7] The annual rate of CO_2 emissions from extraction, production, and consumption of fossil fuels has increased substantially since 1990.[8]

7. Defendants have known for more than 50 years that greenhouse gas pollution from their fossil fuel products would have a significant adverse impacts on the Earth's climate and sea levels. Defendants' awareness of the negative impacts of their actions corresponds almost exactly with the Great Acceleration, and with skyrocketing greenhouse gas emissions. With that knowledge, Defendants took steps to protect their own assets from those threats through immense internal investment in research, infrastructure improvements, and plans to exploit new opportunities in a warming world.

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[5] Will Steffen et al., *The Trajectory of the Anthropocene: The Great Acceleration*, 2 THE ANTHROPOCENE REVIEW 81, 81 (2015).

[6] R.J. Andres et al., *A Synthesis of Carbon Dioxide Emissions from Fossil-Fuel Combustion*, 9 BIOGEOSCIENCES 1845, 1851 (2012).

[7] *Id.*

[8] Friedlingstein et al., *supra* note 4, at 630.

8. Instead of warning of those known consequences following from the intended and foreseeable use of their products and working to minimize the damage associated with the use and combustion of such products, Defendants concealed the dangers, promoted false and misleading information, sought to undermine public support for greenhouse gas regulation, and engaged in massive campaigns to promote the ever-increasing use of their products at ever-greater volumes. These campaigns were intended to and did target the people of Delaware. All Defendants' actions in concealing the dangers of, promoting false and misleading information about, and engaging in massive campaigns to promote increasing use of their fossil fuel products, have contributed substantially to the buildup of CO_2 in the atmosphere that drives global warming and its physical, environmental, and socioeconomic consequences, including those affecting the State.

9. Defendants are directly responsible for the substantial increase in all CO_2 emissions between 1965 and the present. Defendants individually and collectively played leadership roles in denialist campaigns to misinform and confuse consumers and the public and obscure the role of Defendants' products in causing global warming and its associated impacts. But for such campaigns, climate crisis impacts in Delaware would have been substantially mitigated or eliminated altogether. Accordingly, Defendants are directly responsible for a substantial portion of the climate crisis-related impacts in Delaware.

10. As a direct and proximate consequence of Defendants' wrongful conduct described in this Complaint, the environment in and around Delaware is changing, with devastating adverse impacts on the State and its residents, particularly communities of color and low-income communities. Virtually all of Delaware's eastern border is coastal or tidal, and Delaware is one of the lowest-lying states in the nation, with a mean elevation of only approximately 60 feet above sea level. In addition, the beach communities and coastal economy serve as an essential pillar of the State's economy. As a result, Delaware is very vulnerable to the impacts of sea level rise and other climate change impacts. For instance, the average sea level has already risen and will continue to rise substantially along Delaware's coast, causing flooding, inundation, saltwater intrusion, erosion, tidal wetland losses, and beach loss; extreme weather, including coastal storms, drought, heatwaves, and other extreme events will become more frequent, longer-lasting and more severe; and the cascading social, economic, and other consequences of those and myriad other environmental changes—all due to anthropogenic global warming—will increase in Delaware.

11. As a direct result of those and other climate crisis-caused environmental changes, the State has suffered and will continue to suffer severe injuries, including, but not limited to: inundation and loss of State property; inundation of private property and businesses with associated loss of tax revenue; injury or destruction of

State-owned or -operated facilities critical for operations, utility services, and risk management, as well as other assets essential to community health, safety, and well-being; increased costs of maintaining public infrastructure; increased costs of providing government services; increased health care and public health costs; increased planning and preparation costs for community adaptation and resiliency to the effects of the climate crisis; displacement, disruption and/or loss of coastal communities, with associated harm to the State; decreased tax revenue due to impacts on Delaware's tourism- and ocean-based economy; and others.[9]

12. Defendants' individual and collective conduct, including, but not limited to, their introduction of fossil fuel products into the stream of commerce while knowing but failing to warn of the threats posed to the world's climate; their wrongful promotion of their fossil fuel products and concealment of known hazards associated with the use of those products; their public deception campaigns designed

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[9] *See, e.g.*, DIV. OF ENERGY AND CLIMATE, DELAWARE DEPT. OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL, ADAPTING TO SEA LEVEL RISE (2014), *available at* https://dnrec.alpha.delaware.gov/coastal-programs/planning-training/adapting-to-sea-level-rise; DIV. OF ENERGY AND CLIMATE, DELAWARE DEPT. OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL, CLIMATE CHANGE IMPACT ASSESSMENT (2014) (hereinafter "DCCIA") , *available at* http://www.dnrec.delaware.gov/energy/Documents/Climate%20Change%202013-2014/DCCIA%20interior_full_dated.pdf; DELAWARE EMERGENCY MGMT. AGENCY, ALL-HAZARD MITIGATION PLAN (Aug. 2018) , *available at* https://dema.delaware.gov/contentFolder/pdfs/HazardMitigationPlan.pdf.

to obscure the connection between their products and global warming and the environmental, physical, social, and economic consequences flowing from it; and their failure to pursue less hazardous alternatives, actually and proximately caused the State's injuries. In other words, Defendants' concealment and misrepresentation of their products' known dangers—and simultaneous promotion of their unrestrained use—drove consumption, and thus greenhouse gas pollution, and thus the climate crisis.

13. Accordingly, the State brings this action against Defendants for negligent failure to warn, trespass, common law nuisance, and violations of the Delaware Consumer Fraud Act.

14. The State hereby disclaims injuries arising on federal property and those that arose from Defendants' provision of fossil fuel products to the federal government, and seeks no recovery or relief attributable to such injuries.

15. The State seeks to ensure that the parties who have profited from externalizing the consequences and costs of dealing with global warming and its physical, environmental, social, and economic consequences, bear the costs of those impacts on Delaware, rather than the State, taxpayers, residents, or broader segments of the public.

II. PARTIES

A. Plaintiff

16. Plaintiff, State of Delaware, *ex rel*. Kathleen Jennings, Attorney General of the State of Delaware, brings this action in the State's capacity as sovereign, in its proprietary capacity, in its *parens patriae* capacity as an exercise of its authority to protect public trust resources, and as an exercise of its police power, which includes, but is not limited to, its power to prevent injuries to and pollution of the State's property and waters, to prevent and abate nuisances, and to prevent and abate hazards to public health, safety, welfare, and the environment.

17. The Attorney General is the chief law officer of the State, and is statutorily authorized to initiate and maintain this action pursuant to 29 Del. C. §§ 2504 and 2522 and 6 Del. C. § 2522.

18. The State consists of several offices and departments, each with purview over the State's operations, facilities, property, and/or programs that have been injured by Defendants' conduct as alleged herein and consequent global warming-related impacts.

19. Delaware is the state with the lowest mean elevation in the nation, with 381 miles of shoreline, which presents a significant level of risk from climate change. Between eight percent and eleven percent of its land area, including nearly all its tidal wetlands, could be inundated by a sea level rise of 0.5 to 1.5 meters,

respectively.[10] Additionally, average annual precipitation is projected to increase by ten percent in Delaware by the end of the century.[11]

B. Defendants

20. When reference in this Complaint is made to an act or omission of Defendants, unless specifically attributed or otherwise stated, such references should be interpreted to mean that the officers, directors, agents, employees, or representatives of Defendants committed or authorized such an act or omission, or failed to adequately supervise or properly control or direct their employees while engaged in the management, direction, operation or control of the affairs of Defendants, and did so while acting within the scope of their employment or agency.

21. **BP Entities: BP P.L.C., BP America Inc.**

a. Defendant **BP P.L.C.** is a multinational, vertically integrated energy and petrochemical public limited company, registered in England and Wales with its principal place of business in London, England. BP P.L.C. consists of three

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[10] COASTAL PROGRAMS DIVISION, DELAWARE DEPT. OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL, PREPARING FOR TOMORROW'S HIGH TIDE: SEA LEVEL RISE VULNERABILITY ASSESSMENT FOR THE STATE OF DELAWARE ix (2012) (hereinafter "DNREC, SEA LEVEL RISE VULNERABILITY ASSESSMENT"), *available at* http://www.dnrec.delaware.gov/coastal/Documents/SeaLevelRise/AssesmentForWeb.pdf.

[11] DCCIA at 4-4.

main operating segments: (1) exploration and production, (2) refining and marketing, and (3) gas power and renewables. BP P.L.C. is the ultimate parent company of numerous subsidiaries, referred to collectively as the "BP Group," which explore for and extract oil and gas worldwide; refine oil into fossil fuel products such as gasoline; and market and sell oil, fuel, other refined petroleum products, and natural gas worldwide. BP P.L.C.'s subsidiaries explore for oil and natural gas under a wide range of licensing, joint arrangement, and other contractual agreements.

b. BP P.L.C. controls and has controlled companywide decisions about the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. BP P.L.C. is the ultimate decisionmaker on fundamental decisions about the BP Group's core business, *i.e.*, the level of companywide fossil fuels to produce, including production among BP P.L.C.'s subsidiaries. For instance, BP P.L.C. reported that in 2016–17 it brought online thirteen major exploration and production projects. These contributed to a twelve percent increase in the BP Group's overall fossil fuel product production. These projects were carried out by BP P.L.C.'s subsidiaries. Based on these projects, BP P.L.C. expects the BP Group to deliver to customers 900,000 barrels of new product per day by 2021. BP P.L.C. further reported that in 2017 it sanctioned three new exploration projects in Trinidad, India, and the Gulf of Mexico.

c. BP P.L.C. controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities. BP P.L.C. makes fossil fuel production decisions for the entire BP Group based on factors including climate change. BP P.L.C.'s Board of Directors is the highest decision-making body within the company, with direct responsibility for the BP Group's climate change policy. BP P.L.C.'s chief executive is responsible for maintaining the BP Group's system of internal control that governs the BP Group's business conduct. BP P.L.C.'s senior leadership directly oversees a carbon steering group, which manages climate-related matters and consists of two committees overseen directly by the board that focus on climate-related investments.

d. Defendant **BP America Inc.** is a wholly owned subsidiary of BP P.L.C. that acts on BP P.L.C.'s behalf and subject to BP P.L.C.'s control. BP America Inc. is a vertically integrated energy and petrochemical company incorporated in the state of Delaware with its headquarters and principal place of business in Houston, Texas. BP America Inc., consists of numerous divisions and affiliates in all aspects of the fossil fuel industry, including exploration for and production of crude oil and natural gas; manufacture of petroleum products; and

transportation, marketing, and sale of crude oil, natural gas, and petroleum products. BP America Inc. was formerly known as, did or does business as, and/or is the successor in liability to Amoco Corporation, Amoco Oil Company, ARCO Products Company, Atlantic Richfield Delaware Corporation, Atlantic Richfield Company (a Delaware Corporation), BP Exploration & Oil, Inc., BP Products North America Inc., BP Amoco Corporation, BP Amoco Plc, BP Oil, Inc., BP Oil Company, Sohio Oil Company, Standard Oil of Ohio (SOHIO), Standard Oil (Indiana), and The Atlantic Richfield Company (a Pennsylvania Corporation) and its division, the Arco Chemical Company.

e. Defendants BP P.L.C. and BP America, Inc., together with their predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as "BP."

f. The State's claims against BP arise out of the acts and omissions of BP in Delaware and BP's actions elsewhere that caused the injuries in Delaware.

g. BP has and continues to purposefully direct its tortious conduct toward Delaware by intentionally and wrongfully distributing, marketing, advertising, promoting, and supplying its fossil fuel products in Delaware, with knowledge that those products have caused and will continue to cause climate crisis-related injuries in Delaware, including the State's injuries. BP's statements in and outside of Delaware made in furtherance of its campaign of deception and denial,

and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Delaware, were intended to conceal and mislead consumers and the public, including the State and its residents, about the serious adverse consequences from continued use of BP's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products in and outside Delaware, resulting in the State's injuries.

h. Over the last twenty-five years, BP, and specifically BP P.L.C., spent millions of dollars on radio, television, and outdoor advertisements in the Delaware market related to its fossil fuel products. At least as far back as 1988 and as recently as 2020, BP also advertised in print publications circulated widely to Delaware consumers, including but not limited to *The Atlantic*, *Fortune Magazine*, *The New York Times*, *Newsweek*, *Time Magazine*, *The Washington Post*, and *The Wall Street Journal*. These advertisements contained no warning commensurate with the risks of BP's products. Moreover, these advertisements also contained false or misleading statements, misrepresentations, and/or material omissions obfuscating the connection between BP's fossil fuel products and climate change, and/or misrepresenting BP's products or BP itself as environmentally friendly.

i. A significant amount of BP's fossil fuel products are or have been transported, traded, distributed, marketed, manufactured, promoted, sold,

and/or consumed in Delaware, from which BP derives and has derived substantial revenue. For example, BP directly and through its subsidiaries and/or predecessors-in-interest supplied substantial quantities of fossil fuel products to Delaware during the period relevant to this litigation. BP conducts and controls, either directly or through franchise agreements, retail fossil fuel sales at gas station locations throughout Delaware, at which it promotes, markets, and advertises its fossil fuel products under its BP and/or Amoco brand names. During the period relevant to this Complaint, BP sold a substantial percentage of all retail gasoline in Delaware. Additionally, BP distributes and provides its lubricant products for sale at locations throughout Delaware, including, but not limited to, auto body and repair shops, Safeway, and Home Depot locations.

j. BP historically directed its fossil fuel product advertising, marketing, and promotional campaigns to Delaware residents, including maps of Delaware identifying the locations of its service stations. BP continues to market and advertise its fossil fuel products in Delaware to Delaware residents by maintaining an interactive website available to prospective customers in Delaware by which it directs Delaware residents to BP's nearby retail service stations and/or lubricant distributors. Further, BP promotes its products in Delaware by regularly updating and actively promoting its mobile device application, "BPme Rewards,"

throughout the state of Delaware, encouraging Delaware users to consume fuel at its stations in Delaware in exchange for rewards and/or savings on every fuel purchase.

22. **Chevron Entities: Chevron Corporation, Chevron USA, Inc.**

a. Defendant **Chevron Corporation** is a multinational, vertically integrated energy and chemicals company incorporated in Delaware, with its global headquarters and principal place of business in San Ramon, California.

b. Chevron Corporation operates through a web of United States and international subsidiaries at all levels of the fossil fuel supply chain. Chevron Corporation's and its subsidiaries' operations consist of: (1) exploring for, developing, and producing crude oil and natural gas; (2) processing, liquefaction, transportation, and regasification associated with liquefied natural gas; (3) transporting crude oil by major international oil export pipelines; (4) transporting, storing, and marketing natural gas; (5) refining crude oil into petroleum products; (6) marketing of crude oil and refined products; (7) transporting crude oil and refined products by pipeline, marine vessel, motor equipment, and rail car; (8) basic and applied research in multiple scientific fields including chemistry, geology, and engineering; and (9) manufacturing and marketing of commodity petrochemicals, plastics for industrial uses, and fuel and lubricant additives.

c. Chevron Corporation controls and has controlled companywide decisions about the quantity and extent of fossil fuel production and sales, including

those of its subsidiaries. Chevron Corporation determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

d. Chevron Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

e. Defendant **Chevron U.S.A. Inc.** is a Pennsylvania corporation with its principal place of business located in San Ramon, California. Chevron U.S.A. Inc. is registered to do business in Delaware and has a registered agent for service of process in Wilmington, Delaware. Chevron U.S.A. Inc. is a wholly owned subsidiary of Chevron Corporation that acts on Chevron Corporation's behalf and subject to Chevron Corporation's control. Chevron U.S.A. Inc. was formerly known as, and did or does business as, and/or is the successor in liability to Gulf Oil Corporation, Gulf Oil Corporation of Pennsylvania, Chevron Products Company, and Chevron Chemical Company.

f. "Chevron" as used hereafter, means collectively, Defendants Chevron Corporation and Chevron U.S.A. Inc. and their predecessors, successors, parents, subsidiaries, affiliates, and divisions.

g. The State's claims against Chevron arise out of the acts and omissions of Chevron in Delaware and Chevron's actions elsewhere that caused the injuries in Delaware.

h. Chevron has and continues to direct its tortious conduct toward Delaware by intentionally and wrongfully distributing, marketing, advertising, promoting, and supplying its products in Delaware, with knowledge that those products have caused and will continue to cause climate crisis-related injuries in Delaware, including the State's injuries. Chevron's statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Delaware, were intended to conceal and mislead consumers and the public, including the State and its residents, about the serious adverse consequences from continued use of Chevron's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products in and outside Delaware, resulting in the State's injuries.

i. Over the last twenty-five years, Chevron spent millions of dollars on radio, television, and outdoor advertisements in the Delaware market related to its fossil fuel products. At least as far back as 1971 and as recently as 2020, Chevron also advertised in print publications circulated widely to Delaware consumers,

including but not limited to *The Atlantic*, *Fortune Magazine*, *The New York Times*, *Newsweek*, *People*, *Sports Illustrated*, *Time Magazine*, and *The Washington Post*. These advertisements contained no warning commensurate with the risks of Chevron's products. Moreover, these advertisements also contained false or misleading statements, misrepresentations, and/or material omissions obfuscating the connection between Chevron's fossil fuel products and climate change, and/or misrepresenting Chevron's products or Chevron itself as environmentally friendly.

j. A significant amount of Chevron's fossil fuel products are or have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in Delaware, from which Chevron derives and has derived substantial revenue. Chevron's predecessors, the Getty Oil Company and Texaco, owned and operated the Delaware City Refinery from approximately 1956–1988. Chevron conducts and controls, and/or has conducted and controlled, either directly or through franchise agreements, retail fossil fuel sales at its branded gas station locations throughout Delaware, at which it is engaging or at times relevant to this complaint has engaged in the promotion, marketing, and advertisement of its fossil fuel products under its various brand names, including its Chevron, Texaco, and other brand names. Chevron historically directed its fossil fuel product advertising, marketing, and promotional campaigns to Delaware residents, including maps of Delaware identifying the locations of its service stations. Chevron offers a

proprietary credit card known as the "Chevron Techron Advantage Card," which allows consumers in Delaware to pay for gasoline and other products at Chevron-branded service stations, and which encourage Delaware consumers to use Chevron-branded service stations by offering various rewards, including discounts on gasoline purchases at Chevron service stations and cash rebates. Chevron maintains an interactive website available in Delaware by which it directs prospective customers to Chevron-branded service stations. Chevron further maintains a smartphone application known as the "Chevron App" that offers Delaware consumers a cashless payment method for gasoline and other products at Chevron-branded service stations. Consumers in Delaware can also receive rewards including discounts on gasoline purchases by registering their personal identifying information in the Chevron App and using the application to identify and activate gas pumps at Chevron service stations during a purchase.

23. **ConocoPhillips Entities: ConocoPhillips, ConocoPhillips Company, Phillips 66, Phillips 66 Company**

a. Defendant **ConocoPhillips** is a multinational energy company incorporated in Delaware and with its principal place of business in Houston, Texas. ConocoPhillips consists of numerous divisions, subsidiaries, and affiliates that carry out ConocoPhillips's fundamental decisions related to all aspects of the fossil fuel

industry, including exploration, extraction, production, manufacture, transport, and marketing.

b. ConocoPhillips controls and has controlled companywide decisions about the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. ConocoPhillips determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products. ConocoPhillips's most recent annual report subsumes the operations of the entire ConocoPhillips group of subsidiaries under its name. Therein, ConocoPhillips represents that its value—for which ConocoPhillips maintains ultimate responsibility—is a function of its decisions to direct subsidiaries to explore for and produce fossil fuels: "Unless we successfully add to our existing proved reserves, our future crude oil, bitumen, natural gas and natural gas liquids production will decline, resulting in an adverse impact to our business."[12] ConocoPhillips optimizes the ConocoPhillips group's oil and gas portfolio to fit ConocoPhillips's strategic plan. For example, in November 2016, ConocoPhillips announced a plan to generate $5 billion to $8 billion of proceeds over two years by optimizing its business portfolio, including its fossil fuel

[12] CONOCOPHILLIPS, FORM 10-K: ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934 23 (Dec. 31, 2019).

product business, to focus on low cost-of-supply fossil fuel production projects that strategically fit its development plans.

c. ConocoPhillips controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities. For instance, ConocoPhillips's board has the highest level of direct responsibility for climate change policy within the company. ConocoPhillips has developed and implements a corporate Climate Change Action Plan to govern climate change decision-making across all entities in the ConocoPhillips group.

d. Defendant **ConocoPhillips Company** is a wholly owned subsidiary of ConocoPhillips that acts on ConocoPhillips's behalf and subject to ConocoPhillips's control. ConocoPhillips Company is incorporated in Delaware and has its principal office in Bartlesville, Oklahoma.

e. Defendant **Phillips 66** is a multinational energy and petrochemical company incorporated in Delaware and with its principal place of business in Houston, Texas. It encompasses downstream fossil fuel processing, refining, transport, and marketing segments that were formerly owned and/or controlled by ConocoPhillips.

f. Defendant **Phillips 66 Company** is a wholly owned subsidiary of Phillips 66 that acts on Phillips 66's behalf and subject to Phillips 66's control. Phillips 66 Company is incorporated in Delaware and has its principal office in Houston, Texas. Phillips 66 Company was formerly known as, did or does business as, and/or is the successor in liability to Phillips Petroleum Company, Conoco, Inc., Tosco Corporation, and Tosco Refining Co.

g. Defendants ConocoPhillips, ConocoPhillips Company, Phillips 66, and Phillips 66 Company, and their predecessors, successors, parents, subsidiaries, affiliates, and divisions are collectively referred to herein as "ConocoPhillips."

h. ConocoPhillips's statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products, were intended to conceal and mislead consumers and the public about the serious adverse consequences from continued use of ConocoPhillips's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products, resulting in the State's injuries.

24. **<u>Exxon Entities</u>: Exxon Mobil Corporation, ExxonMobil Oil Corporation, XTO Energy, Inc.**

a. Defendant **Exxon Mobil Corporation** is a multinational, vertically integrated energy and chemicals company incorporated in New Jersey with its headquarters and principal place of business in Irving, Texas. Exxon Mobil Corporation is among the largest publicly traded international oil and gas companies in the world. Exxon Mobil Corporation was formerly known as, did or does business as, and/or is the successor in liability to ExxonMobil Refining and Supply Company, Exxon Chemical U.S.A., ExxonMobil Chemical Corporation, ExxonMobil Chemical U.S.A., ExxonMobil Refining & Supply Corporation, Exxon Company, U.S.A., Exxon Corporation, and Mobil Corporation. Exxon Mobil Corporation is registered to do business in Delaware and has a registered agent for service of process in Wilmington, Delaware.

b. Defendant **ExxonMobil Oil Corporation** is a wholly owned subsidiary of Exxon Mobil Corporation, acts on Exxon Mobil Corporation's behalf, and is subject to Exxon Mobil Corporation's control. ExxonMobil Oil Corporation is incorporated in the state of New York with its principal place of business at 5959 Las Colinas Boulevard, Irving, Texas, 75039. ExxonMobil Oil Corporation was formerly known as, did or does business as, and/or is the successor in liability to Mobil Oil Corporation.

c. **Defendant XTO Energy Inc.** is a wholly owned subsidiary of Exxon Mobil Corporation that acts on Exxon Mobil Corporation's behalf and subject to Exxon Mobil Corporation's control. XTO Energy Inc. is incorporated in Delaware with its principal place of business in Spring, Texas. XTO Energy Inc. and its subsidiaries are engaged in the acquisition, development, exploitation, and exploration of both producing oil and gas properties and unproved properties, and in the production, processing, marketing and transportation of oil and natural gas.

d. At least forty-four of Exxon Mobil Corporation's other subsidiaries are also incorporated in Delaware, including but not limited to Ellora Energy, Inc.; Esso Australia Resources Pty Ltd; Exxon International Finance Company, Exxon Luxembourg Holdings, LLC; and Exxon Neftegas Limited.

e. Exxon Mobil Corporation controls and has controlled companywide decisions about the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. Exxon Mobil Corporation's 2017 Form 10-K filed with the United States Securities and Exchange Commission represents that its success, including its "ability to mitigate risk and provide attractive returns to stockholders, depends on [its] ability to successfully manage [its] overall portfolio,

including diversification among types and locations of [its] projects."[13] Exxon Mobil Corporation determines whether and to what extent its subsidiaries market, produce, and/or distribute fossil fuel products.

f. Exxon Mobil Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities. Exxon Mobil Corporation's Board holds the highest level of direct responsibility for climate change policy within the company. Exxon Mobil Corporation's Chairman of the Board and Chief Executive Officer, its President and the other members of its Management Committee are actively engaged in discussions relating to greenhouse gas emissions and the risks of climate change on an ongoing basis. Exxon Mobil Corporation requires its subsidiaries to provide an estimate of greenhouse gas-related emissions costs in their economic projections when seeking funding for capital investments.

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[13] EXXON MOBIL CORPORATION, FORM 10-K: ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934 3–4 (FEB. 28, 2018).

g. Defendants Exxon Mobil Corporation, ExxonMobil Oil Corporation, XTO Energy, Inc., and their predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as "Exxon."

h. The State's claims against Exxon arise out of the acts and omissions of Exxon in Delaware and Exxon's actions elsewhere that caused the injuries in Delaware.

i. Exxon consists of numerous divisions and affiliates in all areas of the fossil fuel industry, including exploration for and production of crude oil and natural gas; manufacture of petroleum products; and transportation, promotion, marketing, and sale of crude oil, natural gas, and petroleum products. Exxon is also a major manufacturer and marketer of commodity petrochemical products.

j. Exxon has and continues to purposefully direct its tortious conduct toward Delaware by intentionally and wrongfully marketing, advertising, promoting, and supplying its fossil fuel products in Delaware, with knowledge that those products have caused and will continue to cause climate crisis-related injuries in Delaware, including the State's injuries. Exxon's statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Delaware, were intended to conceal and mislead consumers and the public, including the State and

its residents, about the serious adverse consequences from continued use of Exxon's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products in and outside Delaware, resulting in the State's injuries.

k. Over the last twenty-five years, Exxon spent millions of dollars on radio, television, and outdoor advertisements in the Delaware market related to its fossil fuel products. At least as far back as 1972 and as recently as 2020, Exxon also advertised in print publications circulated widely to Delaware consumers, including but not limited to *The Atlantic*, *The Economist*, *Fortune Magazine*, *The New York Times*, *People*, *Sports Illustrated*, *Time Magazine*, *The Washington Post*, and *The Wall Street Journal*. These advertisements contained no warning commensurate with the risks of their products. Moreover, these advertisements also contained false or misleading statements, misrepresentations, and/or material omissions obfuscating the connection between Exxon's fossil fuel products and climate change, and/or misrepresenting Exxon's products or Exxon itself as environmentally friendly.

l. A significant amount of Exxon's fossil fuel products are or have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in Delaware, from which Exxon derives and has derived substantial revenue. For example, Exxon directly and through its subsidiaries and/or

predecessors-in-interest supplied substantial quantities of fossil fuel products to Delaware during the period relevant to this litigation. Exxon conducts and controls, either directly or through franchise agreements, retail fossil fuel sales at gas station locations throughout Delaware, at which it promotes, markets, and advertises its fossil fuel products under its Exxon and/or Mobil brand names. During the period relevant to this Complaint, Exxon sold a substantial percentage of all retail gasoline in Delaware.

m. Exxon historically directed its fossil fuel product advertising, marketing, and promotional campaigns to Delaware residents, including maps of Delaware identifying the locations of its service stations. Exxon continues to market and advertise its fossil fuel products in Delaware to Delaware residents by maintaining an interactive website available to prospective customers by which it directs Delaware residents to Exxon's nearby retail service stations and lubricant distributors. Further, Exxon promotes its products in Delaware by regularly updating and actively promoting its mobile device application, "Exxon Mobil Rewards+," throughout the state of Delaware, which encourages Delaware users to consume fuel at Exxon stations in Delaware in exchange for rewards on every fuel purchase.

25. **Hess Corporation**

a. Defendant **Hess Corporation**, formerly known as Amerada Petroleum Corporation and Amerada Hess Corporation, is a multinational fossil fuel company engaged in exploration, development, production, transportation, purchase, sale, marketing, and promotion of crude oil, natural gas liquids, and natural gas. Hess Corporation is incorporated in Delaware and maintains its principal executive office in New York, New York.

b. Hess Corporation controls and has controlled companywide decisions about the quantity and extent of its fossil fuel production and sales, including those of its subsidiaries. Hess Corporation determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

c. Hess Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

d. Hess Corporation and its predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as "Hess."

e. Hess wrongfully distributed, marketed, advertised, and promoted its products in Delaware, with knowledge that those products would cause climate

crisis-related injuries in Delaware, including the State's injuries. Hess's statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Delaware, were intended to conceal and mislead consumers and the public, including the State and its residents, about the serious adverse consequences from continued use of Hess's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products in and outside Delaware, resulting in the State's injuries.

f. A significant amount of Hess's fossil fuel products have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in Delaware, from which Hess has derived substantial revenue. For example, during the time relevant to this complaint, Hess owned, operated, and/or franchised Hess-branded service stations in Delaware at which it marketed and sold its fossil fuel products.

26. **Marathon Entities: Marathon Oil Corporation, Marathon Oil Company, Marathon Petroleum Corporation, Marathon Petroleum Company LP, Speedway LLC**

a. Defendant **Marathon Oil Corporation** is engaged in the exploration and production of crude oil, natural gas, and oil sands. Marathon Oil

Corporation is incorporated in Delaware with its corporate headquarters in Houston, Texas.

b. Marathon Oil Corporation controls and has controlled companywide decisions about the quantity and extent of its fossil fuel production and sales, including those of its subsidiaries. Marathon Oil Corporation determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

c. Marathon Oil Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

d. Defendant **Marathon Oil Company** is a wholly owned subsidiary of Marathon Oil Corporation that acts on Marathon Oil Corporation's behalf and is subject to Marathon Oil Corporation's control. Marathon Oil Company is engaged in the exploration and production of crude oil, natural gas, and oil sands. Marathon Oil Company is incorporated in Delaware with its principal place of business in Houston, Texas.

e. Defendant **Marathon Petroleum Corporation** is a multinational energy company incorporated in Delaware and with its principal place of business in Findlay, Ohio. Marathon Petroleum Corporation was spun off from the operations of Marathon Oil Corporation in 2011. It consists of multiple subsidiaries and affiliates involved in fossil fuel product refining, marketing, retail, and transport, including both petroleum and natural gas products. Marathon Petroleum Corporation merged in October 2018 with Andeavor Corporation, formerly known as Tesoro Corporation.

f. Marathon Petroleum Corporation controls and has controlled companywide decisions about the quantity and extent of its fossil fuel production and sales, including those of its subsidiaries. Marathon Petroleum Corporation determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

g. Marathon Petroleum Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

h. Defendant **Marathon Petroleum Company LP** is a wholly owned subsidiary of Marathon Petroleum Corporation that acts on Marathon Petroleum Corporation's behalf and is subject to Marathon Petroleum Corporation's control. Marathon Petroleum Company LP is a vertically integrated fossil fuel refining, marketing, and transporting company. Marathon Petroleum Company LP is incorporated in Delaware with its headquarters and principal place of business in Findlay, Ohio.

i. Defendant **Speedway LLC** is a wholly owned subsidiary of Marathon Petroleum Corporation that acts on Marathon Petroleum Corporation's behalf and is subject to Marathon Petroleum Corporation's control. Speedway LLC is incorporated in Delaware with its principal place of business in Enon, Ohio. Speedway LLC is the one of the largest convenience store chains in the country, including a number of stores in Delaware. Speedway LLC was formerly known as, and did or does business as, and/or is the successor in liability to EMC Marketing, LLC and Speedway Superamerica LLC.

j. Defendants Marathon Oil Corporation, Marathon Oil Company, Marathon Petroleum Corporation, Marathon Petroleum Company LP, Speedway LLC, and their predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as "Marathon."

k. Marathon wrongfully distributed, marketed, advertised, and promoted its products in Delaware, with knowledge that those products would cause climate crisis-related injuries in Delaware, including the State's injuries. Marathon's statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products, were intended to conceal and mislead consumers and the public about the serious adverse consequences from continued use of Marathon's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products, resulting in the State's injuries.

l. A significant amount of Marathon's fossil fuel products are or have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in Delaware, from which Marathon has derived substantial revenue.

27. **Murphy Oil Entities: Murphy Oil Corporation and Murphy USA, Inc.**

a. Defendant **Murphy Oil Corporation** is a vertically integrated, global oil and natural gas exploration and production company headquartered in Houston, Texas and incorporated in Delaware. Murphy Oil Corporation consists of

numerous divisions, subsidiaries, and affiliates engaged in various aspects of the fossil industry, including exploration and production of crude oil, natural gas and natural gas liquids worldwide.

b. Murphy Oil Corporation controls and has controlled companywide decisions about the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. Murphy Oil Corporation's Board of Directors determines whether and to what extent its subsidiary holdings produce fossil fuel products.

c. Murphy Oil Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

d. Defendant **Murphy USA Inc.** is a Delaware corporation with its headquarters in El Dorado, Arkansas. Murphy was incorporated in 2013 and holds, through its subsidiaries, the former U.S. retail marketing business of its former parent company, Murphy Oil Corporation, plus other assets and liabilities of Murphy Oil Corporation that supported the activities of the U.S. retail marketing operations.

e. Murphy Oil Corporation and Murphy USA Inc., and their predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as "Murphy."

f. Murphy has and continues to wrongfully distribute, market, advertise, promote, and supply its products, with knowledge that those products have caused and will continue to cause climate crisis-related injuries in Delaware, including the State's injuries. Murphy's statements made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products, were intended to conceal and mislead consumers and the public, including the State and its residents, about the serious adverse consequences from continued use of Murphy's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products, resulting in the State's injuries.

28. **Shell Entities: Royal Dutch Shell PLC, Shell Oil Company**

a. Defendant **Royal Dutch Shell PLC** is a vertically integrated, multinational energy and petrochemical company. Royal Dutch Shell is incorporated in England and Wales, with its headquarters and principal place of business in The Hague, Netherlands. Royal Dutch Shell PLC consists of numerous divisions, subsidiaries and affiliates engaged in all aspects of the fossil fuel industry,

including exploration, development, extraction, manufacturing and energy production, transport, trading, marketing, and sales.

b. Royal Dutch Shell PLC controls and has controlled companywide decisions about the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. Royal Dutch Shell PLC's Board of Directors determines whether and to what extent Shell subsidiary holdings around the globe produce Shell-branded fossil fuel products. For instance, in 2015, a Royal Dutch Shell PLC subsidiary employee admitted in a deposition that Royal Dutch Shell PLC's Board of Directors made the decision about whether to drill a particular oil deposit off the coast of Alaska.

c. Royal Dutch Shell PLC controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities. Overall accountability for climate change within the Shell group of companies lies with Royal Dutch Shell PLC's Chief Executive Officer and Executive Committee. For instance, at least as early as 1988, Royal Dutch Shell PLC, through its subsidiaries, was researching companywide CO_2 emissions and concluded that the Shell group of companies accounted for "4% of the CO_2 emitted

worldwide from combustion," and that climatic changes could compel the Shell group, as controlled by Royal Dutch Shell PLC, to "examine the possibilities of expanding and contracting [its] business accordingly."[14] Royal Dutch Shell PLC's CEO has stated that Royal Dutch Shell PLC would reduce the carbon footprint of its products, including those of its subsidiaries "by reducing the net carbon footprint of the full range of Shell emissions, from our operations and from the consumption of our products."[15] Additionally, in November 2017, Royal Dutch Shell PLC announced it would reduce the carbon footprint of "its energy products" by "around" half by 2050.[16] Royal Dutch Shell PLC's effort is inclusive of all fossil fuel products produced under the Shell brand, including those of its subsidiaries.

d. Defendant **Shell Oil Company** is a wholly owned subsidiary of Royal Dutch Shell PLC that acts on Royal Dutch Shell PLC's behalf and subject to Royal Dutch Shell PLC's control. Shell Oil Company is incorporated in Delaware and with its principal place of business in Houston, Texas. Shell Oil Company was

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[14] HEALTH, SAFETY, & ENVTL. DIV., SHELL INTERNATIONALE PETROLEUM MAATSCHAPPIJ B.B., THE GREENHOUSE EFFECT (REPORT SERIES HSE 88-001) 29 (1988).

[15] Royal Dutch Shell PLC Press Release, *Management Day 2017: Shell Updates Company Strategy and Financial Outlook, and Outlines Net Carbon Footprint Ambition,* SHELL GLOBAL COMPANY WEBSITE (Nov. 28, 2017), https://www.shell.com/media/news-and-media-releases/2017/management-day-2017-shell-updates-company-strategy.html.

[16] *Id*.

formerly known as, did or does business as, and/or is the successor in liability to Deer Park Refining LP, Shell Oil, Shell Oil Products, Shell Chemical, Shell Trading US, Shell Trading (US) Company, Shell Energy Services, Texaco Inc., The Pennzoil Company, Shell Oil Products Company LLC, Shell Oil Products Company, Star Enterprise, LLC, and Pennzoil-Quaker State Company.

e. Defendants Royal Dutch Shell PLC, Shell Oil Company, and their predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as "Shell."

f. The State's claims against Shell arise out of the acts and omissions of Shell in Delaware and Shell's actions elsewhere that caused the injuries in Delaware.

g. Shell has and continues to purposefully direct its tortious conduct toward Delaware by intentionally and wrongfully distributing, marketing, advertising, promoting, and supplying its products in Delaware, with knowledge that those products have caused and will continue to cause climate crisis-related injuries in Delaware, including the State's injuries. Shell's statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Delaware, were intended to conceal and mislead consumers and the public, including the State and

its residents, about the serious adverse consequences from continued use of Shell's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products in and outside Delaware, resulting in the State's injuries.

h. Over the last twenty-five years, Shell spent millions of dollars on radio, television, and outdoor advertisements in the Delaware market related to its fossil fuel products. At least as far back as 1970 and as recently as 2020, Shell also advertised in print publications circulated widely to Delaware consumers, including but not limited to *The Atlantic*, *Life Magazine*, *The New York Times*, *People*, *Sports Illustrated*, *Time Magazine*, *The Washington Post*, and *The Wall Street Journal*. These advertisements contained no warning commensurate with the risks of Shell's products. Moreover, these advertisements also contained false or misleading statements, misrepresentations, and/or material omissions obfuscating the connection between Shell's fossil fuel products and climate change, and/or misrepresenting Shell's products or Shell itself as environmentally friendly.

i. A significant amount of Shell's fossil fuel products are or have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in Delaware, from which Shell derives and has derived substantial revenue. From approximately 1998–2004, Shell owned and operated the Delaware City Refinery as part of its joint venture Motiva Enterprises LLC. Among other

endeavors, Shell conducts and controls, either directly or through franchise agreements, retail fossil fuel sales at gas station locations throughout Delaware, at which it promotes, markets, and advertises its fossil fuel products under its Shell brand name. During the period relevant to this Complaint, Shell sold a substantial percentage of all retail gasoline sold in Delaware. Shell also supplies, markets, and promotes its Pennzoil line of lubricants at retail and service stations throughout Delaware, including at Target and Walmart.

j. Shell historically directed its fossil fuel product advertising, marketing, and promotional campaigns to Delaware, including maps of Delaware identifying the locations of its service stations. Shell markets and advertises its fossil fuel products in Delaware to Delaware residents by maintaining an interactive website available to prospective customers by which it directs Delaware residents to Shell's nearby retail service stations. Shell offers a proprietary credit card known as the "Shell Fuel Rewards Card," which allows consumers in Delaware to pay for gasoline and other products at Shell-branded service stations, and which encourages consumers to use Shell-branded gas stations by offering various rewards, including discounts on gasoline purchases. Shell further maintains a smartphone application known as the "Shell US App" that offers Delaware consumers a cashless payment method for gasoline and other products at Shell-branded service stations. Delaware consumers utilize the payment method by providing their credit card information

through the application. Delaware consumers can also receive rewards, including discounts on gasoline purchases, by registering their personal identifying information in the Shell US App and using the application to identify and activate gas pumps at Shell service stations during a purchase.

29. **Citgo Petroleum Corporation**

a. Defendant **Citgo Petroleum Corporation** is a multinational energy company that is a direct, wholly owned subsidiary of PDV America, Incorporated, which is a wholly owned subsidiary of PDV Holding, Incorporated. Citgo Petroleum Corporation is incorporated in Delaware and maintains its headquarters in Houston, Texas.

b. Citgo Petroleum Corporation controls and has controlled companywide decisions about the quantity and extent of its fossil fuel production and sales, including those of its subsidiaries. Citgo Petroleum Corporation determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

c. Citgo Petroleum Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link

between fossil fuel use and climate-related impacts on the environment and communities.

d. Defendant Citgo Petroleum Corporation and its predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as "Citgo."

e. Citgo has wrongfully distributed, marketed, advertised, and promoted its products in Delaware, with knowledge that those products would cause climate crisis-related injuries in Delaware, including the State's injuries. Citgo's statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Delaware, were intended to conceal and mislead consumers and the public, including the State and its residents, about the serious adverse consequences from continued use of Citgo's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products in and outside Delaware, resulting in the State's injuries.

f. A significant amount of Citgo's fossil fuel products are or have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in Delaware, from which Citgo has derived substantial revenue.

For instance, Citgo has marketed, sold, and/or distributed heating oil in Delaware including through the CITGO – Venezuela Heating Oil program, a heating oil assistance program. Additionally, Citgo markets and/or has marketed gasoline and other fossil fuel products to consumers, including through Citgo-branded petroleum service stations in Delaware. Citgo owns and operates an interactive webpage that allows consumers to locate Citgo-branded gas stations in Delaware.

30. **Total Entities: Total S.A., Total Specialties USA Inc.**

a. Defendant **Total S.A.** is a French energy conglomerate, with its headquarters in Courbevoi, France.

b. Total S.A. controls and has controlled companywide decisions about the quantity and extent of its fossil fuel production and sales, including those of its subsidiaries. Total S.A. determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

c. Total S.A. controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

d. Defendant **Total Specialties USA Inc.** is a wholly owned subsidiary of Total S.A. involved in the marketing and distribution of Total S.A.'s

fossil fuel products. Total Specialties USA Inc. is incorporated in Delaware and headquartered in Houston, Texas.

e. Defendants Total S.A., Total Specialties USA Inc., and their predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as "Total."

f. The State's claims against Total arise out of the acts and omissions of Total in Delaware and Total's actions elsewhere that caused the injuries in Delaware.

g. Total's statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products, were intended to conceal and mislead consumers and the public about the serious adverse consequences from continued use of Total's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products, resulting in the State's injuries.

31. **Occidental Petroleum Corporation**

a. Defendant **Occidental Petroleum Corporation** is a multinational, vertically integrated energy and chemical company incorporated in Delaware and with its principal place of business in Houston, Texas. Occidental's

operations consist of three segments: (1) the exploration for, extraction of, and production of oil and natural gas products; (2) the manufacture and marketing of chemicals and vinyls; and (3) processing, transport, storage, purchase, and marketing of oil, natural gas, and power.

b. Occidental Petroleum Corporation controls and has controlled companywide decisions about the quantity and extent of its fossil fuel production and sales, including those of its subsidiaries. Occidental Petroleum Corporation determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

c. Occidental Petroleum Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

d. The State's claims against Occidental Petroleum Corporation arise out of the acts and omissions of Occidental Petroleum Corporation in Delaware and Occidental Petroleum Corporation's actions elsewhere that caused the injuries in Delaware.

e. Defendant Occidental Petroleum Corporation and its predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as "Occidental."

f. Occidental's statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products, were intended to conceal and mislead consumers and the public about the serious adverse consequences from continued use of Occidental's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products, resulting in the State's injuries.

32. **Devon Energy Corporation**

a. Defendant **Devon Energy Corporation** is an independent energy company engaged in the exploration, development, and production of oil, and natural gas. It is incorporated in Delaware and maintains its principal place of business in Oklahoma City, Oklahoma. Devon is engaged in multiple aspects of the fossil fuel industry, including exploration, development, production, and marketing of its fossil fuel products.

b. Devon Energy Corporation controls and has controlled companywide decisions about the quantity and extent of its fossil fuel production

and sales, including those of its subsidiaries. Devon Energy Corporation determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

c. Devon Energy Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

d. Defendant Devon Energy Corporation and its predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as "Devon."

e. Devon's statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products, were intended to conceal and mislead consumers and the public about the serious adverse consequences from continued use of Devon's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products, resulting in the State's injuries.

33. **Apache Corporation**

a. Defendant **Apache Corporation** is a publicly traded Delaware corporation with its principal place of business in Houston, Texas. Apache is an oil and gas exploration and production company, with crude oil and natural gas exploration and extraction operations in the United States, Canada, Egypt, and in the North Sea.

b. Apache Corporation controls and has controlled companywide decisions about the quantity and extent of its fossil fuel production and sales, including those of its subsidiaries. Apache Corporation determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

c. Apache Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

d. Defendant Apache Corporation and its predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as "Apache."

e. Apache's statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn

consumers of global warming-related hazards when it marketed, advertised, and sold its products, were intended to conceal and mislead consumers and the public about the serious adverse consequences from continued use of Apache's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products, resulting in the State's injuries.

34. **CONSOL Entities: CNX Resources Corporation, CONSOL Energy Inc.**

a. Defendant **CNX Resources Corporation** is a vertically integrated energy company that is or has been involved in coal mining, oil and natural gas exploration and production, fossil fuel product distribution, and fossil fuel product marketing. CNX Resources Corporation is incorporated in Delaware, with its principal place of business in Canonsburg, Pennsylvania. CNX Resources Corporation was formerly known as CONSOL Energy Inc. CONSOL Energy Inc. and its predecessors in interest mined and sold coal since the 1860s. In 2017, CNX Resources Corporation split its coal mining and related downstream operations into a new entity, also called CONSOL Energy Inc.

b. CNX Resources Corporation controls and has controlled companywide decisions about the quantity and extent of fossil fuel production, including those of its subsidiaries.

c. CNX Resources Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

d. Defendant **CONSOL Energy Inc.** is an energy company involved in coal mining and production. CONSOL Energy Inc. is incorporated in Delaware and has its principal place of business in Canonsburg, Pennsylvania. CONSOL Energy Inc. was formerly known as, did or does business as, and/or is the successor in liability to CONSOL Mining Corporation and/or CNX Resources Corporation.

e. CONSOL Energy Inc. controls and has controlled companywide decisions about the quantity and extent of fossil fuel production, including those of its subsidiaries.

f. CONSOL Energy Inc. controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

g. Defendants CNX Resources Corporation, CONSOL Energy Inc., and their predecessors, successors, parents, subsidiaries, affiliates, and divisions are collectively referred to herein as "CONSOL."

h. CONSOL's statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products, were intended to conceal and mislead consumers and the public about the serious adverse consequences from continued use of CONSOL's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products, resulting in the State's injuries.

35. **Ovintiv, Inc.**

a. Defendant **Ovintiv, Inc.** is an extractor and marketer of oil and natural gas, headquartered in Denver, Colorado and incorporated in Delaware. Ovintiv, Inc. was formerly known as Encana Corporation, a Canadian corporation with its principal place of business in Calgary, Alberta, Canada. Ovintiv, Inc. has facilities including gas plants and gas wells in Colorado, Texas, Wyoming, Louisiana, and New Mexico. By approximately 2005, Ovintiv, Inc. was the largest independent owner and operator of natural gas storage facilities in North America.

b. Ovintiv, Inc. controls and has controlled companywide decisions about the quantity and extent of its fossil fuel production and sales, including those of its subsidiaries. Ovintiv, Inc. determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

c. Ovintiv, Inc. controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

d. Defendant Ovintiv, Inc. and its predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as "Ovintiv."

e. Ovintiv's statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products, were intended to conceal and mislead consumers and the public about the serious adverse consequences from continued use of Ovintiv's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products, resulting in the State's injuries.

36. Defendants BP, Chevron, Conocophillips, Phillips 66, Exxon, Hess, Marathon, Murphy, Shell, Citgo, Total, Occidental, Devon, Apache, CONSOL, and Ovintiv are collectively referred to as "Fossil Fuel Defendants."

37. **American Petroleum Institute**

a. Defendant American Petroleum Institute ("API") is a nonprofit corporation based in the District of Columbia and registered to do business in Delaware. API was created in 1919 to represent the American petroleum industry as a whole. With more than 600 members, API is the country's largest oil trade association. API's purpose is to advance its individual members' collective business interests, which includes increasing consumer consumption of oil and gas to the Fossil Fuel Defendants' financial benefit. Among other functions, API also coordinates among members of the petroleum industry, gathers information of interest to the industry and disseminates that information to its members.

b. Acting on behalf of and under the supervision and control of the Fossil Fuel Defendants, API has participated in and led several coalitions, front groups, and organizations that have promoted disinformation about fossil fuel products to consumers, including the Global Climate Coalition, Partnership for a Better Energy Future, Coalition for American Jobs, Alliance for Energy and Economic Growth, and Alliance for Climate Strategies. These front groups were formed to provide climate disinformation and advocacy from a misleadingly

objective source, when, in fact, they were financed and controlled by Fossil Fuel Defendants. Fossil Fuel Defendants have benefited from the spread of this disinformation, because, among other things, it has ensured a thriving consumer market for oil and gas, resulting in substantial profits for Fossil Fuel Defendants.

c. API's stated mission includes "influenc[ing] public policy in support of a strong, viable U.S. oil and natural gas industry,"[17] which includes increasing consumers' consumption of oil and gas to Fossil Fuel Defendants' financial benefit. In effect, API acts and has acted as a marketing arm for its member companies. Over the last fifteen years, API spent millions of dollars on television, newspaper, radio, and internet advertisements in the Delaware market.

d. Member companies participate in API strategy, governance, and operation through membership dues and by contributing company officers and other personnel to API boards, committees, and task forces. Fossil Fuel Defendants have collectively steered the policies and trade practices of API through membership, Executive Committee roles, and/or budgetary funding of API. Fossil Fuel Defendants used their control over and involvement in API to further their goal of influencing consumer demand for their fossil fuel products through a long-term advertising and communications campaign centered on climate change denialism.

[17] American Petroleum Institute, *About API*, https://www.api.org/about.

Fossil Fuel Defendants directly supervised and participated in API's misleading messaging regarding climate change.

e. The following Fossil Fuel Defendants and/or their predecessors-in-interest are and/or have been core API members at times relevant to this litigation: BP, Chevron, ConocoPhillips, Exxon, Hess, Marathon, Murphy, Shell, Citgo, Total, Occidental, Devon Energy, Apache Corporation, and Ovintiv. Executives from some Fossil Fuel Defendants served on the API Executive Committee and/or as API Chairman, which is akin to serving as a corporate officer. For example, Exxon's CEO served on API's Executive Committee for fifteen of 25 years between 1991 and 2016 (1991, 1996–97, 2001, and 2005–2016). BP's CEO served as API's Chairman in 1988, 1989, and 1998. Chevron's CEO served as API Chairman in 1994, 1995, 2003, and 2012. Shell's President served on API's Executive Committee from 2005–06. ConocoPhillips Chairman and CEO Ryan Lance was Board President from 2016 to 2018, and Exxon President and CEO Darren Woods was Board President from 2018 to 2020. In 2020, API elected Phillips 66 Chairman and CEO Greg Garland to serve a two-year term as the Board President. Executives from ConocoPhillips, Hess, Marathon, Citgo, Total, and Occidental also served as members of API's Board of Directors at various times.

f. Relevant information was shared among API and Fossil Fuel Defendants and their predecessors-in-interest through (1) API distributing

information it held to its members and/or (2) participation of officers and other personnel from Fossil Fuel Defendants and their predecessors-in-interest on API boards, committees, and task forces.

C. Relevant Non-Parties: Defendants' Agents and Front Groups

38. As set forth in greater detail below, each Fossil Fuel Defendant had actual knowledge that its fossil fuel products were hazardous. Fossil Fuel Defendants obtained knowledge of the hazards of their products independently and through their membership and involvement in trade associations such as API.

39. Fossil Fuel Defendants employed and financed several industry associations, such as API, and industry-created front groups to serve their climate change disinformation and denial mission. These organizations, acting on behalf of and under the supervision and control of Fossil Fuel Defendants, assisted the deception campaign by implementing public advertising and outreach campaigns to discredit climate science, funding scientists to cast doubt upon climate science, denying the human connection to climate change, and overall engaging in a significant marketing campaign that misrepresented and concealed the dangers of Fossil Fuel Defendants' fossil fuel products with the aim of protecting or enhancing Fossil Fuel Defendants' sales to consumers, including consumers in Delaware. Defendants actively supervised, facilitated, consented to, and/or directly participated in the misleading messaging of these front groups, from which Fossil Fuel

Defendants profited significantly, including in the form of increased sales in Delaware.

40. **The National Mining Association (NMA)** is a national trade association incorporated in Delaware and headquartered in Washington, D.C., representing more than 250 corporations and organizations in the mining industry. NMA was formed in 1995 through the merger of the National Coal Association, which was founded in 1917, and the American Mining Congress, which was founded in 1897. Both predecessor organizations were members of the Global Climate Coalition, and the National Coal Association was linked to the 1991 Information Council for the Environment campaign.

a. The following Fossil Fuel Defendants and/or their predecessors-in-interest are and/or have been NMA members at times relevant to this litigation: CONSOL, the Pittsburg and Midway Coal Mining Company (Chevron), and Island Creek Coal (Occidental Petroleum).

b. CONSOL's president and CEO currently serves as the Vice Chairman of the Board for NMA, and the former president and CEO of Island Creek Coal, previously served as the chairman.

c. NMA and API have been co-members of various organizations that participated in Defendants' campaign of deception, including the Global Climate Coalition (NMA's predecessor, the National Coal Association was a

founding member),[18] Alliance for Climate Strategies,[19] and Partnership for a Better Energy Future.[20] Moreover, Jack Gerard, who served as API's president and CEO until 2018, previously served as the CEO for the NMA.[21]

41. **The Information Council for the Environment (ICE)** was formed by coal companies and their allies, including Western Fuels Association and the National Coal Association. Associated companies included Pittsburg and Midway Coal Mining (Chevron) and Occidental's subsidiary, Island Creek Coal.

42. **The Global Climate Coalition (GCC)** was an industry group formed to oppose greenhouse gas emission reduction initiatives. GCC was founded in 1989 shortly after the first meeting of the Intergovernmental Panel on Climate Change ("IPCC"), the United Nations body for assessing the science related to climate

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[18] *See Global Climate Coalition Membership*, CLIMATEFILES (1989), http://www.climatefiles.com/denial-groups/global-climate-coalition-collection/1989-membership.

[19] Caroline Jones et al., Brown Univ. Climate and Development Lab, *Countermovement Coalitions: Climate Denialist Organizational Profiles* (2018), http://www.climatedevlab.brown.edu/uploads/2/8/4/0/28401609/covercountermovementcoalitions.2.2019.pdf.

[20] Herman K. Trabish, *Industry asks EPA to reconsider new emissions rule*, UTILITYDIVE (July 24, 2014), https://www.utilitydive.com/news/industry-asks-epa-to-reconsider-new-emissions-rule/290259.

[21] Press Release, American Petroleum Institute, *API President and CEO Jack Gerard To Depart in August* (Jan. 17, 2018), https://www.api.org/news-policy-and-issues/news/2018/01/17/api-president-and-ceo-jack-gerard-to-depart-in-august.

change. GCC disbanded in or around 2001. Founding members included API, PMAA, and the National Coal Association, a predecessor of the National Mining Association.[22] Over the course of its existence, GCC corporate members included Amoco (BP), API, Chevron, Exxon, Shell Oil, Texaco (Chevron), Occidental, CONSOL (as Consolidation Coal Company), and Phillips Petroleum (ConocoPhillips). Over its existence other members and funders included ARCO (BP), and the Western Fuels Association.

III. JURISDICTION

43. Jurisdiction of this Court is proper under Article IV, Section 7, of the Delaware Constitution, Section 541 of Title 10 of the Delaware Code, and Section 3104 of Title 10 of the Delaware Code.

44. This case qualifies for assignment to the Superior Court Complex Commercial Litigation Division because the amount in controversy exceeds one million dollars ($1,000,000).

45. This Court has personal jurisdiction over Defendants because each Defendant is, or was during the relevant time, incorporated in Delaware and/or licensed to do business in Delaware; maintained or maintains their principal place

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[22] *Global Climate Coalition Membership*, CLIMATEFILES (1989), http://www.climatefiles.com/denial-groups/global-climate-coalition-collection/1989-membership.

of business in Delaware; is transacting or has transacted business in Delaware; is contracting or has contracted to supply services or things in Delaware; has or does derive substantial revenue from Delaware or engages in a persistent course of conduct in Delaware; had or has interests in, uses, or possess real property in Delaware; and/or caused tortious injury in Delaware and has intentionally engaged in conduct aimed at Delaware, which has caused harm they knew was likely to be incurred in Delaware. Each Defendant has sufficient contacts with Delaware to give rise to the current action, has continuous and systematic contacts with Delaware, or has consented either explicitly or implicitly to the jurisdiction of this Court.

46. Additionally, jurisdiction is proper over non-resident defendants BP plc, Chevron USA, Inc., Exxon Mobil Corporation, ExxonMobil Oil Corporation, Royal Dutch Shell, and Total S.A.:

a. With respect to its subsidiaries, each non-resident defendant parent[23] controls and has controlled decisions about the quantity and extent of its fossil fuel production and sales; determines whether and to what extent to market, produce, and/or distribute its fossil fuel products; and controls and has controlled decisions related to its marketing and advertising, and specifically communications strategies concerning climate change and the link between fossil fuel use and impacts

[23] Except Chevron USA, Inc., which is itself a subsidiary.

on the environment. Each non-resident defendant parent has the power to direct and control the resident subsidiaries named here. Thus, the subsidiaries are agents of the parent. As agents, the subsidiaries of each non-resident defendant conducted activities in Delaware at the direction of their parent companies and for the parent companies' benefit. Specifically, the subsidiaries furthered the parents' campaign of deception and denial through misrepresentations, omissions, and failures to warn, which resulted in climate injuries in the State and increased sales to the parents. Therefore, the subsidiaries' jurisdictional activities are properly attributed to the parents, and serve as a basis to assert jurisdiction over the non-resident defendant parents.

b. All Fossil Fuel Defendants, by and through API and other organizations like NMA, ICE, and GCC, conspired to conceal and misrepresent the known dangers of fossil fuels, to knowingly withhold information regarding the effects of using fossil fuel products, to discredit climate change science and create the appearance such science is uncertain, and to engage in massive campaigns to promote heavy use of their fossil fuel products, which they knew would result in injuries to the State. Through their own actions and through their membership and participation in organizations like API and NMA, each Defendant was and is a member of that conspiracy. Defendants committed substantial acts to further the conspiracy in Delaware by making misrepresentations and omissions to Delaware

consumers and failing to warn them about the disastrous effects of fossil fuel use. A substantial effect of the conspiracy has also and will also occur in Delaware, as the State has suffered and will suffer injuries from Defendants' wrongful conduct including, but not limited to, sea level rise, flooding, erosion, loss of wetlands and beaches, ocean acidification, and other social and economic consequences of these environmental changes. Defendants knew or should have known, based on information passed to them from their internal research divisions and affiliates, trade associations and industry groups, that their actions in Delaware and elsewhere would result in these injuries in and to Delaware. Finally, the climate effects described herein are direct and foreseeable results of Defendants' conduct in furtherance of the conspiracy.

IV. FACTUAL BACKGROUND

A. Defendants Are Responsible for Causing and Accelerating Climate Change.

47. Human-caused warming of the Earth is unequivocal. As a result, the atmosphere and oceans are warming, sea level is rising, snow and ice cover is diminishing, oceans are acidifying, and hydrologic systems have been altered, among other environmental changes.

48. The mechanism by which human activity causes global warming and climate disruption is well established: ocean and atmospheric warming is

overwhelmingly caused by anthropogenic greenhouse gas emissions.

49. Greenhouse gases are largely byproducts of humans combusting fossil fuels to produce energy and using fossil fuels to create petrochemical products.

50. Prior to World War II, most anthropogenic CO_2 emissions were caused by land-use practices, such as forestry and agriculture, which altered the ability of the land and global biosphere to absorb CO_2 from the atmosphere; the impacts of such activities on Earth's climate were relatively minor. Since that time, however, both the annual rate and total volume of anthropogenic CO_2 emissions have increased enormously following the advent of major uses of oil, gas, and coal.

51. The graph below illustrates that fossil fuel emissions are the dominant source of increases in atmospheric CO_2 since the mid-twentieth century:

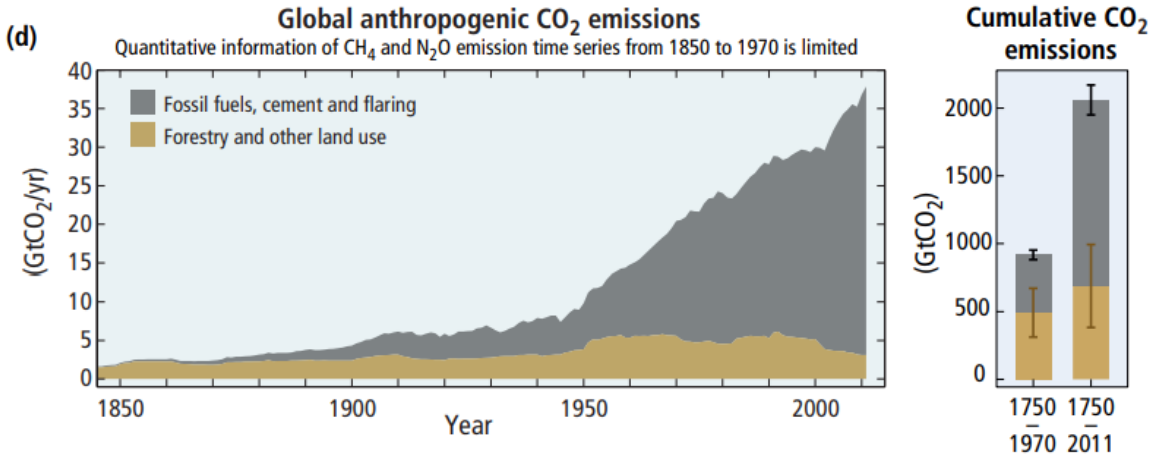

Figure 1: Global Anthropogenic CO_2 Emissions[24]

[24] IPCC 2014 SYNTHESIS REPORT, *supra* note 3, at 3.

52. The recent acceleration of fossil fuel emissions has led to a correspondingly sharp spike in atmospheric concentration of CO_2. Since 1960, the concentration of CO_2 in the atmosphere has gone from under 320 parts per million ("ppm") to approximately 415 ppm.[25] The rate of growth of atmospheric CO_2 is also accelerating. From 1960 to 1970, atmospheric CO_2 increased by an average of approximately 1 ppm per year; in the last five years, it has increased by more than 2.5 ppm per year.[26]

53. The graph below indicates the tight nexus between the sharp increase in emissions from the combustion of fossil fuels and the steep rise of atmospheric concentrations of CO2.

[25] Global Monitoring Laboratory, *Trends in Atmospheric Carbon Dioxide*, NOAA (last visited Sept. 4, 2020), https://www.esrl.noaa.gov/gmd/ccgg/trends.
[26] *Id.*

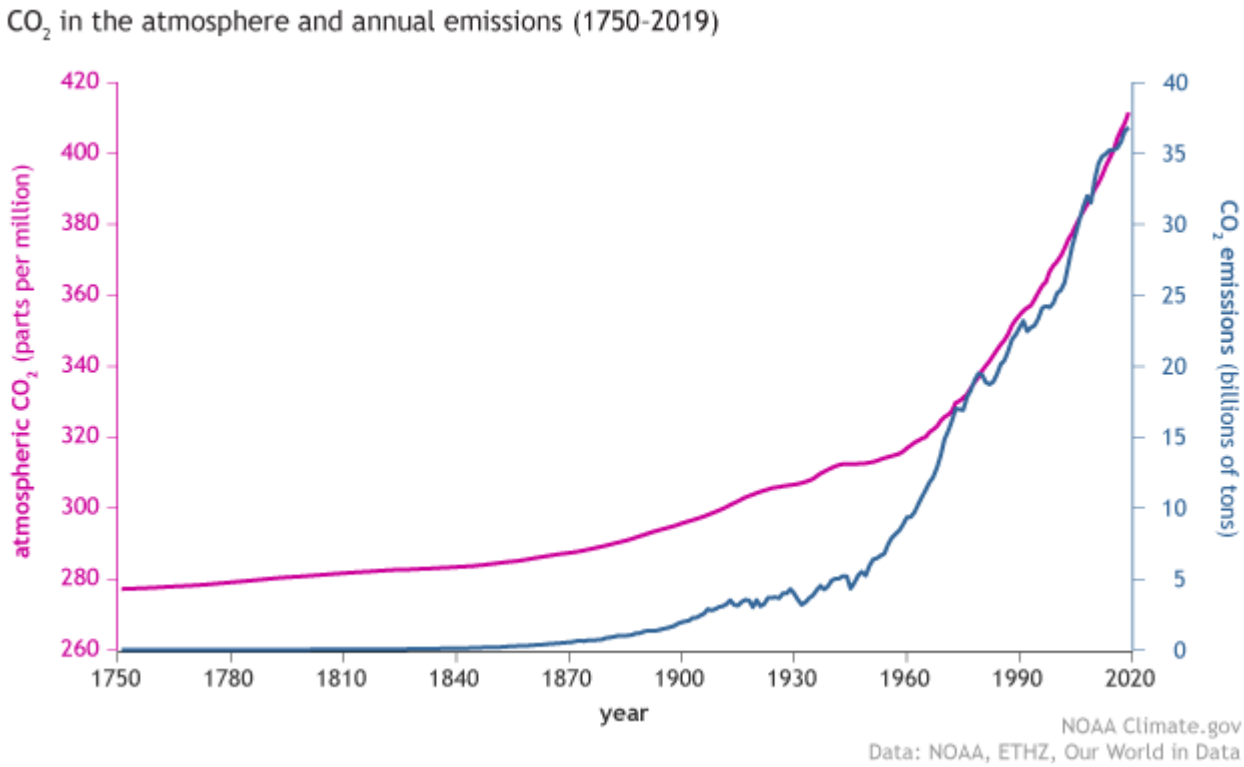

Figure 2: Atmospheric CO2 Concentration and Annual Emissions[27]

54. Because of the increased burning of fossil fuel products, concentrations of greenhouse gases in the atmosphere are now at a level unprecedented in at least 3 million years.[28]

55. As greenhouse gases accumulate in the atmosphere, the Earth radiates less energy back to space. This accumulation and associated disruption of the

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[27] Rebecca Lindsey, *Climate Change: Atmospheric Carbon Dioxide*, NOAA (Aug. 14, 2020), https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide.

[28] *More CO_2 than ever before in 3 million years, shows unprecedented computer simulation*, SCIENCE DAILY (Apr. 3, 2019), https://www.sciencedaily.com/releases/2019/04/190403155436.htm.

Earth's energy balance have myriad environmental and physical consequences, including, but not limited to, the following:

a. Warming of the Earth's average surface temperature both locally and globally, and increased frequency and intensity of heatwaves; to date, global average air temperatures have risen approximately 1 degree C (1.8 degrees F) above preindustrial temperatures; temperatures in particular locations have risen more;

b. Sea level rise, due to the thermal expansion of warming ocean waters and runoff from melting glaciers and ice sheets;

c. Flooding and inundation of land and infrastructure, increased erosion, higher wave run-up and tides, increased frequency and severity of storm surges, saltwater intrusion, and other impacts of higher sea levels;

d. Changes to the global climate, and generally toward longer periods of drought interspersed with fewer and more severe periods of precipitation, and associated impacts on the quantity and quality of water resources available to both human and ecological systems;

e. Ocean acidification, due to the increased uptake of atmospheric carbon dioxide by the oceans;

f. Increased frequency and intensity of extreme weather events due to the increase in the atmosphere's ability to hold moisture and increased evaporation;

g. Changes to terrestrial and marine ecosystems, and consequent impacts on the range of flora and fauna; and

h. Adverse impacts on human health associated with extreme weather, extreme heat, decreased air quality, and vector-borne illnesses.

56. As discussed below, these consequences of Defendants' conduct and its exacerbation of the climate crisis are already impacting Delaware, its communities, and its resources, and will continue to increase in severity in Delaware.

57. Without Defendants' exacerbation of global warming caused by their conduct as alleged herein, the current physical and environmental changes caused by global warming would have been far less than those observed to date. Similarly, effects that will occur in the future would also be far less, or would be avoided entirely.[29]

58. Defendants' efforts between 1965 and the present to deceive about the consequences of the normal use of their fossil fuel products; conceal the hazards of those products from consumers; promote use of their fossil fuel products despite knowing the dangers associated with those products; doggedly campaign against

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[29] *See, e.g.,* Peter U. Clark, et al., *Consequences of Twenty-First-Century Policy for Multi-Millennial Climate and Sea-Level Change*, 6 NATURE CLIMATE CHANGE 360, 365 (2016) ("Our modelling suggests that the human carbon footprint of about [470 billion tons] by 2000 . . . has already committed Earth to a [global mean sea level] rise of ~1.7m (range of 1.2 to 2.2 m).").

regulation of those products based on falsehoods, omissions, and deceptions; and failure to pursue less hazardous alternative products available to them; unduly inflated the market for fossil fuel products. Consequently, substantially more anthropogenic greenhouse gases have been emitted into the environment than would have been absent that conduct.

59. By quantifying greenhouse gas pollution attributable to Fossil Fuel Defendants' products and conduct, climatic and environmental responses to those emissions are also calculable, and can be attributed to Fossil Fuel Defendants on an individual and aggregate basis.

60. Defendants' conduct caused a substantial portion of global atmospheric greenhouse gas concentrations, and the attendant historical, projected, and committed disruptions to the environment—and consequent injuries to Delaware, its communities, and its resources—associated therewith.

61. Defendants, individually and together, have substantially and measurably contributed to Delaware's climate crisis-related injuries.

B. Defendants Went to Great Lengths to Understand, and Either Knew or Should Have Known About, the Dangers Associated with Their Fossil Fuel Products.

62. The fossil fuel industry has known about the potential warming effects of greenhouse gas emissions since as early as the 1950s. In 1954, geochemist Harrison Brown and his colleagues at the California Institute of Technology wrote

to API, informing the trade association that preliminary measurements of natural archives of carbon in tree rings indicated that fossil fuels had caused atmospheric carbon dioxide levels to increase by about 5% since 1840.[30] API funded the scientists for various research projects, and measurements of carbon dioxide continued for at least one year and possibly longer, although the results were never published or otherwise made available to the public.[31]

63. In 1957, H.R. Brannon of Humble Oil (predecessor-in-interest to ExxonMobil) measured an increase in atmospheric carbon dioxide similar to that measured by Harrison Brown. Brannon communicated this information to API. Brannon knew of Brown's measurements, compared them with his, and found they agreed. Brannon published his results in the scientific literature, which was available to Fossil Fuel Defendants and/or their predecessors-in-interest.[32]

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[30] *See* Benjamin Franta, *Early Oil Industry Knowledge of CO_2 and Global Warming*, 8 NATURE CLIMATE CHANGE 1024, 1024–25 (2018).

[31] *Id*.

[32] H.R. Brannon, Jr. et al., *Radiocarbon Evidence on the Dilution of Atmospheric and Oceanic Carbon by Carbon from Fossil Fuels*, 38 AMERICAN GEOPHYSICAL UNION TRANSACTIONS 643, 643–50 (1957).

64. In 1959, API organized a centennial celebration of the American oil industry at Columbia University in New York City.[33] High-level representatives of Fossil Fuel Defendants were in attendance. One of the keynote speakers was the nuclear physicist Edward Teller. Teller warned the industry that "a temperature rise corresponding to a 10 per cent increase in carbon dioxide will be sufficient to melt the icecap and submerge . . . [a]ll the coastal cities." Teller added that since "a considerable percentage of the human race lives in coastal regions, I think that this chemical contamination is more serious than most people tend to believe."[34]

65. Following his speech, Teller was asked to "summarize briefly the danger from increased carbon dioxide content in the atmosphere in this century." He responded that "there is a possibility the icecaps will start melting and the level of the oceans will begin to rise."[35]

66. By 1965, concern over the potential for fossil fuel products to cause disastrous global warming reached the highest levels of the United States' scientific community. In that year, President Lyndon B. Johnson's Science Advisory

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[33] *See* ALLAN NEVINS & ROBERT G. DUNLOP, ENERGY AND MAN: A SYMPOSIUM (Appleton-Century-Crofts, New York 1960). *See also* Franta, *supra* note 30, at 1024–25.

[34] Edward Teller, *Energy patterns of the future*, in ENERGY AND MAN: A SYMPOSIUM 53–72 (1960).

[35] *Id.*

Committee's Environmental Pollution Panel reported that a 25% increase in carbon dioxide concentrations could occur by the year 2000, that such an increase could cause significant global warming, that melting of the Antarctic ice cap and rapid sea level rise could result, and that fossil fuels were the clearest source of the pollution.[36]

67. Three days after President Johnson's Science Advisory Committee report was published, the president of API, Frank Ikard, addressed leaders of the petroleum industry in Chicago at the trade association's annual meeting. Ikard relayed the findings of the report to industry leaders, saying,

> The substance of the report is that there is still time to save the world's peoples from the catastrophic consequence of pollution, but time is running out.[37]

Ikard also relayed that "by the year 2000 the heat balance will be so modified as possibly to cause marked changes in climate beyond local or even national efforts" and quoted the report's finding that "the pollution from internal combustion engines is so serious, and is growing so fast, that an alternative nonpolluting means of powering automobiles, buses, and trucks is likely to become a national necessity."[38]

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[36] PRESIDENT'S SCIENCE ADVISORY COMMITTEE, *Restoring the Quality of Our Environment: Report of the Environmental Pollution Panel* 9, 119–24 (Nov. 1965), https://hdl.handle.net/2027/uc1.b4315678.

[37] *See* Franta, *supra* note 30, at 1024–25.

[38] *Id.*

68. Thus, by 1965, Defendants and their predecessors-in-interest were aware that the scientific community had found that fossil fuel products, if used profligately, would cause global warming by the end of the century, and that such global warming would have wide-ranging and costly consequences.

69. In 1968, API received a report from the Stanford Research Institute, which it had hired to assess the state of research on environmental pollutants, including carbon dioxide.[39] The assessment endorsed the findings of President Johnson's Scientific Advisory Council from three years prior, stating, "Significant temperature changes are almost certain to occur by the year 2000, and . . . there seems to be no doubt that the potential damage to our environment could be severe." The scientists warned of "melting of the Antarctic ice cap" and informed API that "[p]ast and present studies of CO_2 are detailed and seem to explain adequately the present state of CO_2 in the atmosphere." What was missing, the scientists said, was work on "air pollution technology and . . . systems in which CO_2 emissions would be brought under control."[40]

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[39] Elmer Robinson & R.C. Robbins, *Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants*, STANFORD RESEARCH INSTITUTE (Feb. 1968), https://www.smokeandfumes.org/documents/document16.

[40] *Id.*

70. In 1969, the Stanford Research Institute delivered a supplemental report on air pollution to API, projecting with alarming particularity that atmospheric CO_2 concentrations would reach 370 parts per million ("ppm") by 2000[41]—almost exactly what it turned out to be (369 ppm).[42] The report explicitly connected the rise in CO_2 levels to the combustion of fossil fuels, finding it "unlikely that the observed rise in atmospheric CO_2 has been due to changes in the biosphere."

71. By virtue of their membership and participation in API at that time, Fossil Fuel Defendants received or should have received the Stanford Research Institute reports and were on notice of their conclusions.

72. In 1972, API members, including Fossil Fuel Defendants, received a status report on all environmental research projects funded by API. The report summarized the 1968 SRI report describing the impact of fossil fuel products, including Defendants', on the environment, including global warming and attendant consequences. Fossil Fuel Defendants and/or their predecessors-in-interest that received this report include, but were not limited to: American Standard of Indiana (BP), Asiatic (Shell), Ashland (Marathon), Atlantic Richfield (BP), British

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[41] Elmer Robinson & R.C. Robbins, *Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants Supplement*, STANFORD RESEARCH INSTITUTE (June 1969).

[42] NASA GODDARD INSTITUTE FOR SPACE STUDIES, *Global Mean CO_2 Mixing Ratios (ppm): Observations*, https://data.giss.nasa.gov/modelforce/ghgases/Fig1A.ext.txt.

Petroleum (BP), Chevron Standard of California (Chevron), Esso Research (ExxonMobil), Ethyl (formerly affiliated with Esso, which was subsumed by ExxonMobil), Getty (ExxonMobil), Gulf (Chevron, among others), Humble Standard of New Jersey (ExxonMobil/Chevron/BP), Marathon, Mobil (ExxonMobil), Pan American (BP), Shell, Standard of Ohio (BP), Texaco (Chevron), Union (Chevron), Skelly (ExxonMobil), Colonial Pipeline (ownership has included BP, ExxonMobil, and Chevron entities, among others), Continental (ConocoPhillips), Dupont (former owner of Conoco), Phillips (ConocoPhillips), and Caltex (Chevron).[43]

73. In 1977, James Black of Exxon's Products Research Division presented to the Exxon Corporation Management Committee on the greenhouse effect. The next year, in 1978, Black presented to another internal Exxon group, PERCC. In a letter to the Vice President of Exxon Research and Engineering, Black summarized his presentations.[44] He reported that "current scientific opinion overwhelmingly favors attributing atmospheric carbon dioxide increase to fossil fuel consumption,"

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[43] AMERICAN PETROLEUM INSTITUTE, COMMITTEE FOR AIR AND WATER CONSERVATION, ENVIRONMENTAL RESEARCH: A STATUS REPORT (Jan. 1972), http://files.eric.ed.gov/fulltext/ED066339.pdf.

[44] Letter from J.F. Black, Exxon Research and Engineering Co., to F.G. Turpin, Exxon Research and Engineering Co., *The Greenhouse Effect*, CLIMATEFILES (June 6, 1978), http://www.climatefiles.com/exxonmobil/1978-exxon-memo-on-greenhouse-effect-for-exxon-corporation-management-committee.

and that doubling atmospheric carbon dioxide, according to the best climate model available, would "produce a mean temperature increase of about 2°C to 3°C over most of the earth," with two- to three-times as much warming at the poles. The figure below, reproduced from Black's memo, illustrates Exxon's understanding of the timescale and magnitude of global warming its products would cause.

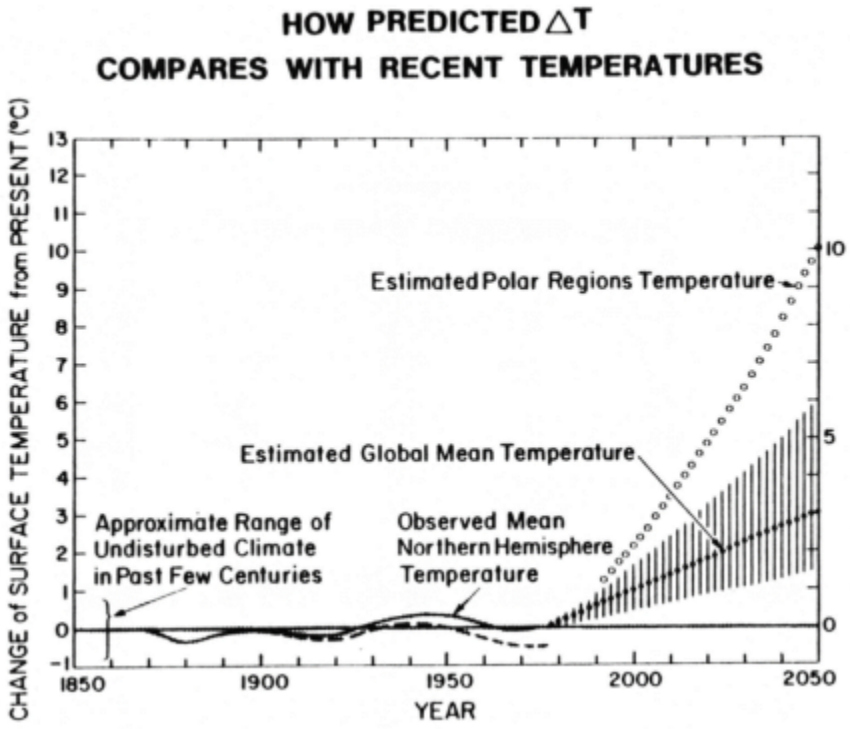

Figure 3: Future global warming predicted internally by Exxon in 1977.[45]

74. The impacts of such global warming, Black reported, would include "more rainfall," which would "benefit some areas and would harm others." "Some

[45] *Id*. The company predicted global warming of 3°C by 2050, with 10°C warming in polar regions. The difference between the dashed and solid curves prior to 1977 represents global warming that Exxon believed may already have been occurring.

countries would benefit, but others could have their agricultural output reduced or destroyed." "Even those nations which are favored, however, would be damaged for a while since their agricultural and industrial patterns have been established on the basis of the present climate." Black reported that "[i]t is currently estimated that mankind has a 5–10 yr. time window to obtain the necessary information" and "establish what must be done," at which time, "hard decisions regarding changes in energy strategies might become critical."[46]

75. Also in 1977, Henry Shaw of the Exxon Research and Engineering Technology Feasibility Center attended a meeting of scientists and governmental officials in Atlanta, Georgia, on developing research programs to study carbon dioxide and global warming. Shaw's internal memo to Exxon's John W. Harrison reported that "[t]he climatic effects of carbon dioxide release may be the primary limiting factor on energy production from fossil fuels[.]"[47]

76. In 1979, Exxon's W. L. Ferrall distributed an internal memorandum.[48] The memo reported that "The most widely held theory [about global warming] is

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[46] *Id*.

[47] Henry Shaw, *Environmental Effects of Carbon Dioxide*, CLIMATE INVESTIGATIONS CENTER (Oct. 31, 1977), https://www.industrydocuments.ucsf.edu/docs/tpwl0228.

[48] Letter from W.L. Ferrall, Exxon Research and Engineering Co., to Dr. R.L. Hirsch, *Controlling Atmospheric CO_2*, CLIMATE INVESTIGATIONS CENTER (Oct. 16, 1979), https://www.industrydocuments.ucsf.edu/docs/mqwl0228.

that: The increase [in carbon dioxide] is due to fossil fuel combustion; [i]ncreasing CO_2 concentration will cause a warming of the earth's surface; [and t]he present trend of fossil fuel consumption will cause dramatic environmental effects before the year 2050. [...] The potential problem is great and urgent." The memo stated that if limits were not placed on fossil fuel production:

> Noticeable temperature changes would occur around 2010 as the [carbon dioxide] concentration reaches 400 ppm [parts per million]. Significant climatic changes occur around 2035 when the concentration approaches 500 ppm. A doubling of the pre-industrial concentration [*i.e.*, 580 ppm] occurs around 2050. The doubling would bring about dramatic changes in the world's environment[.][49]

Those projections proved remarkably accurate: annual average atmospheric CO_2 concentrations surpassed 400 parts per million in 2015 for the first time in millions of years.[50] Limiting the carbon dioxide concentration in the atmosphere to 440 ppm, or a 50% increase over preindustrial levels, which the memo said was "assumed to be a relatively safe level for the environment," would require fossil fuel emissions to peak in the 1990s and non-fossil energy systems to be rapidly deployed. Eighty percent of fossil fuel resources, the memo calculated, would have to be left in the

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[49] *Id*.

[50] Nicola Jones, *How the World Passed a Carbon Threshold and Why It Matters*, YALE ENVIRONMENT 360 (Jan. 26, 2017), http://e360.yale.edu/features/how-the-world-passed-a-carbon-threshold-400ppm-and-why-it-matters.

ground to avoid doubling atmospheric carbon dioxide concentrations. Certain fossil fuels, such as shale oil, could not be substantially exploited at all.

77. In November 1979, Exxon's Henry Shaw wrote to Exxon's Harold Weinberg urging "a very aggressive defensive program in . . . atmospheric science and climate because there is a good probability that legislation affecting our business will be passed."[51] Shaw stated that an expanded research effort was necessary to "influence possible legislation on environmental controls" and "respond" to environmental groups, which had already opposed synthetic fuels programs based on carbon dioxide emissions. Shaw suggested the formation of a "small task force" to evaluate a potential program in carbon dioxide and climate, acid rain, carcinogenic particulates, and other pollution issues caused by fossil fuels.[52]

78. In 1979, API and its members, including Fossil Fuel Defendants, convened a Task Force to monitor and share cutting edge climate research among the oil industry. The group was initially called the CO_2 and Climate Task Force, but in 1980 changed its name to the Climate and Energy Task Force (hereinafter referred to as "CO_2 Task Force"). Membership included senior scientists and engineers from

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[51] Memorandum from H. Shaw to H.N. Weinberg, *Research in Atmospheric Science*, CLIMATE INVESTIGATIONS CENTER (Nov. 19, 1979), https://www.industrydocuments.ucsf.edu/docs/yqwl0228.

[52] *Id.*

nearly every major U.S. and multinational oil and gas company, including Exxon, Mobil (ExxonMobil), Amoco (BP), Phillips (ConocoPhillips), Texaco (Chevron), Shell, Sunoco, Sohio (BP), as well as Standard Oil of California (BP) and Gulf Oil (Chevron), among others. The Task Force was charged with monitoring government and academic research, evaluating the implications of emerging science for the petroleum and gas industries, and identifying where reductions in greenhouse gas emissions from Defendants' fossil fuel products could be made.[53]

79. In 1979, API prepared a background paper on carbon dioxide and climate for the CO_2 Task Force, stating that CO_2 concentrations were rising steadily in the atmosphere, and predicting when the first clear effects of global warming might be detected.[54] The API reported to its members that although global warming would occur, it would likely go undetected until approximately the year 2000, because, the API believed, its effects were being temporarily masked by a natural

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[53] Neela Banerjee, *Exxon's Oil Industry Peers Knew About Climate Dangers in the 1970s, Too*, INSIDE CLIMATE NEWS (Dec. 22, 2015), https://insideclimatenews.org/news/22122015/exxon-mobil-oil-industry-peers-knew-about-climate-change-dangers-1970s-american-petroleum-institute-api-shell-chevron-texaco.

[54] Memorandum from R.J. Campion to J.T. Burgess, *The API's Background Paper on CO_2 Effects*, CLIMATE INVESTIGATIONS CENTER (Sep. 6, 1979), https://www.industrydocuments.ucsf.edu/docs/lqwl0228.

cooling trend. However, this cooling trend, the API warned its members, would reverse around 1990, adding to the warming caused by carbon dioxide.

80. In 1980, API's CO_2 Task Force invited Dr. John Laurmann, "a recognized expert in the field of CO_2 and climate," to present to its members.[55] The meeting lasted for seven hours and included a "complete technical discussion" of global warming caused by fossil fuels, including "the scientific basis and technical evidence of CO_2 buildup, impact on society, methods of modeling and their consequences, uncertainties, policy implications, and conclusions that can be drawn from present knowledge." Representatives from Standard Oil of Ohio (predecessor to BP), Texaco (now Chevron), Exxon, and the API were present, and the minutes of the meeting were distributed to the entire API CO_2 Task Force. Laurmann informed the Task Force of the "scientific consensus on the potential for large future climatic response to increased CO_2 levels" and that there was "strong empirical evidence that [the carbon dioxide] rise [was] caused by anthropogenic release of CO_2, mainly from fossil fuel burning." Unless fossil fuel production and use were

[55] Letter from Jimmie J. Nelson, American Petroleum Institute, to AQ-9 Task Force, *The CO2 Problem; Addressing Research Agenda Development*, CLIMATE INVESTIGATIONS CENTER (Mar. 18, 1980), https://www.industrydocuments.ucsf.edu/docs/gffl0228.

controlled, atmospheric carbon dioxide would be twice preindustrial levels by 2038, with "likely impacts" along the following trajectory:

> 1°C RISE (2005): BARELY NOTICEABLE
>
> 2.5°C RISE (2038): MAJOR ECONOMIC CONSEQUENCES, STRONG REGIONAL DEPENDENCE
>
> 5°C RISE (2067): GLOBALLY CATASTROPHIC EFFECTS

Laurmann warned the CO_2 Task Force that global warming of 2.5°C would "bring[] world economic growth to a halt[.]" Laurmann also suggested that action should be taken immediately, asking, "Time for action?" and noting that if achieving high market penetration for new energy sources would require a long time (e.g., decades), then there would be "no leeway" for delay. The minutes of the CO_2 Task Force's meeting show that one of the Task Force's goals was "to help develop ground rules for […] the cleanup of fuels as they relate to CO_2 creation," and the Task Force discussed the requirements for a worldwide "energy source changeover" away from fossil fuels.[56]

81. In 1980, Imperial Oil Limited (a Canadian ExxonMobil subsidiary) reported to managers and environmental staff at multiple affiliated Esso and Exxon companies that there was "no doubt" that fossil fuels were aggravating the build-up

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[56] *Id.*

of CO_2 in the atmosphere.[57] Imperial noted that "[t]echnology exists to remove CO_2 from stack gases but removal of only 50% of the CO_2 would double the cost of power generation."[58]

82. In December 1980, Exxon's Henry Shaw distributed a memorandum on the "CO_2 Greenhouse Effect."[59] Shaw stated that the future buildup of carbon dioxide was a function of fossil fuel use, and that internal calculations performed at Exxon indicated that atmospheric carbon dioxide would double around the year 2060. According to the "most widely accepted" climate models, Shaw reported, such a doubling of carbon dioxide would "most likely" result in global warming of approximately 3°C, with a greater effect in polar regions. Calculations predicting a lower temperature increase, such as 0.25°C, were "not held in high regard by the scientific community," Shaw said. Shaw also noted that the ability of the oceans to absorb heat could delay (but not prevent) the temperature increase "by a few decades," and that natural, random temperature fluctuations would hide global

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[57] IMPERIAL OIL LTD., REVIEW OF ENVIRONMENTAL PROTECTION ACTIVITIES FOR 1978–1979 (Aug. 6, 1980), http://www.documentcloud.org/documents/2827784-1980-Imperial-Oil-Review-of-Environmental.html#document/p2.

[58] *Id*.

[59] Memorandum from Henry Shaw to T.K. Kett, *Exxon Research and Engineering Company's Technological Forecast: CO_2 Greenhouse Effect* (Dec. 18, 1980), https://www.documentcloud.org/documents/2805573-1980-Exxon-Memo-Summarizing-Current-Models-And.html.

warming from CO_2 until around the year 2000. The memo included the Figure below illustrates global warming anticipated by Exxon, as well as the company's understanding that significant global warming would occur before exceeding the range of natural variability and being detected.

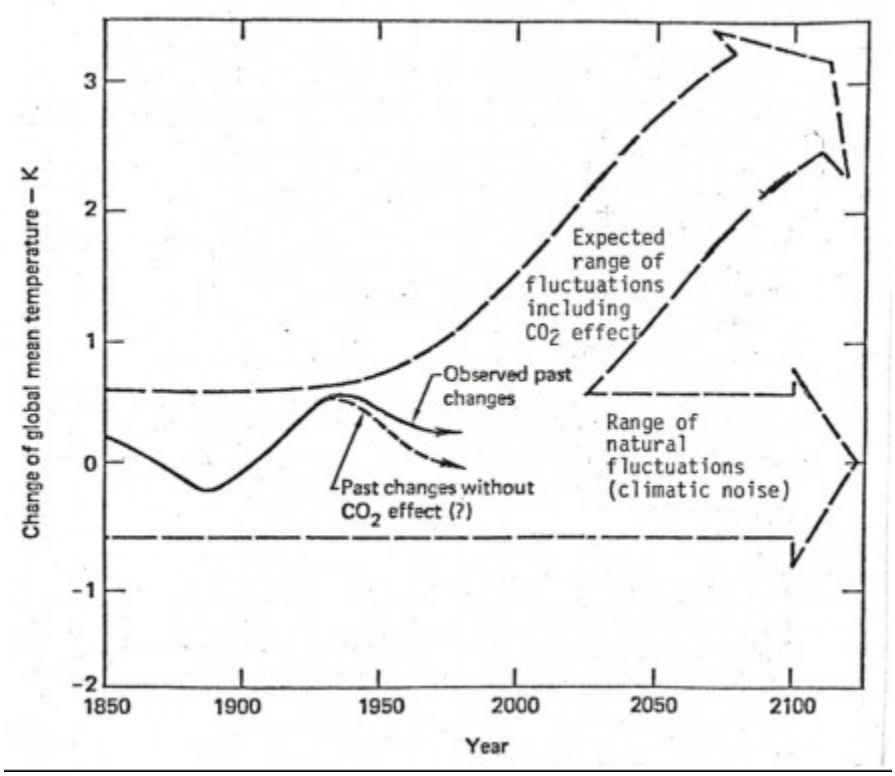

Figure 4: Future global warming predicted internally by Exxon in 1980.[60]

The memo reported that such global warming would cause "increased rainfall[] and increased evaporation," which would have a "dramatic impact on soil moisture, and

[60] *Id*. The company anticipated a doubling of carbon dioxide by around 2060 and that the oceans would delay the warming effect by a few decades, leading to approximately 3°C warming by the end of the century.

in turn, on agriculture." Some areas would turn to desert, and the American Midwest would become "much drier." "[W]eeds and pests," the memo reported, "would tend to thrive with increasing global average temperature." Other "serious global problems" could also arise, such as the melting of the West Antarctic ice sheet, which "could cause a rise in the sea level on the order of 5 meters." The memo called for "society" to pay the bill, estimating that some adaptive measures would cost no more than "a few percent" of Gross National Product (i.e., $400 billion in 2018).[61] Exxon predicted that national policy action would not occur until around 1989, when the Department of Energy would finish a ten-year study of carbon dioxide and global warming.[62] Shaw also reported that Exxon had studied various responses for avoiding or reducing a carbon dioxide build-up, including "stopping all fossil fuel combustion at the 1980 rate" and "investigat[ing] the market penetration of non-fossil fuel technologies." The memo estimated that such non-fossil energy technologies "would need about 50 years to penetrate and achieve roughly half of the total [energy] market."[63]

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[61] *Id.; see Gross National Product*, FEDERAL RESERVE BANK OF ST. LOUIS (updated Mar. 26, 2020), https://fred.stlouisfed.org/series/GNPA.

[62] Memorandum from Henry Shaw to T.K. Kett, *Exxon Research and Engineering Company's Technological Forecast: CO_2 Greenhouse Effect* (Dec. 18, 1980), https://www.documentcloud.org/documents/2805573-1980-Exxon-Memo-Summarizing-Current-Models-And.html.

[63] *Id.*

83. In February 1981, Exxon's Contract Research Office prepared and distributed a "Scoping Study on CO_2" to the leadership of Exxon Research and Engineering Company.[64] The study reviewed Exxon's current research on carbon dioxide and considered whether to expand Exxon's research on carbon dioxide or global warming further at that time. The study recommended against expanding Exxon's research activities in those areas, because its current research programs were sufficient for achieving the company's goals of closely monitoring federal research, building credibility and public relations value, and developing in-house expertise with regard to carbon dioxide and global warming. However, the study recommended that Exxon centralize its activities in monitoring, analyzing, and disseminating outside research being done on carbon dioxide and global warming. The study stated that Exxon's James Black was actively monitoring and keeping the company apprised of outside research developments, including those on climate modeling and "CO_2-induced effects." The study also noted that other companies in the fossil fuel industry were "auditing Government meetings on the subject." In discussing "options for reducing CO_2 build-up in the atmosphere," the study noted that although capturing CO_2 from flue gases was technologically possible, the cost

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[64] Letter from G.H. Long, Exxon Research and Engineering Co., to P.J. Lucchesi et al., *Atmospheric CO_2 Scoping Study*, CLIMATE INVESTIGATIONS CENTER (Feb. 5, 1981), https://www.industrydocuments.ucsf.edu/docs/yxfl0228.

was high, and "energy conservation or shifting to renewable energy sources[] represent the only options that might make sense."[65]

84. Thus, by 1981, Exxon and other fossil fuel companies were actively monitoring all aspects of carbon dioxide and global warming research both nationally and internationally, and Exxon had recognized that a shift to renewable energy sources would be necessary to avoid a large carbon dioxide build-up in the atmosphere and resultant global warming.

85. Exxon scientist Roger Cohen warned his colleagues in a 1981 internal memorandum that "future developments in global data gathering and analysis, along with advances in climate modeling, may provide strong evidence for a delayed CO_2 effect of a truly substantial magnitude," and that under certain circumstances it would be "very likely that we will unambiguously recognize the threat by the year 2000."[66] Cohen had expressed concern that the memorandum understated the potential effects of unabated CO_2 emissions from Defendants' fossil fuel products, saying, "it is distinctly possible that [Exxon Planning Division's] . . . scenario will

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[65] *Id*.

[66] Memorandum from R.W. Cohen to W. Glass, CLIMATEFILES (Aug. 18, 1981), http://www.climatefiles.com/exxonmobil/1981-exxon-memo-on-possible-emission-consequences-of-fossil-fuel-consumption.

produce effects which will indeed be catastrophic (at least for a substantial fraction of the world's population)."[67]

86. In 1981, Exxon's Henry Shaw, the company's lead climate researcher at the time, prepared a summary of Exxon's current position on the greenhouse effect for Edward David Jr., president of Exxon Research and Engineering, stating in relevant part:

- "Atmospheric CO_2 will double in 100 years if fossil fuels grow at 1.4%/a^2
- 3°C global average temperature rise and 10°C at poles if CO_2 doubles
    - Major shifts in rainfall/agriculture
    - Polar ice may melt"[68]

87. In 1982, another report prepared for API by scientists at the Lamont-Doherty Geological Observatory at Columbia University recognized that atmospheric CO_2 concentration had risen significantly compared to the beginning of the industrial revolution from about 290 parts per million to about 340 parts per million in 1981 and acknowledged that despite differences in climate modelers' predictions, there was scientific consensus that "a doubling of atmospheric CO_2 from [ ] pre-industrial revolution value would result in an average global temperature rise

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[67] *Id*.

[68] Memorandum from Henry Shaw to Dr. E.E. David, *CO_2 Position Statement*, INSIDE CLIMATE NEWS (May 15, 1981), https://insideclimatenews.org/documents/exxon-position-co2-1981.

of (3.0 ± 1.5)°C [5.4 ± 2.7 °F]." It went further, warning that "[s]uch a warming can have serious consequences for man's comfort and survival since patterns of aridity and rainfall can change, the height of the sea level can increase considerably and the world food supply can be affected."[69] Exxon's own modeling research confirmed this, and the company's results were later published in at least three peer-reviewed scientific papers.[70]

88. Also in 1982, Exxon's Environmental Affairs Manager distributed a primer on climate change to a "wide circulation [of] Exxon management […] intended to familiarize Exxon personnel with the subject."[71] The primer was "restricted to Exxon personnel and not to be distributed externally." The primer compiled science on climate change, confirmed fossil fuel combustion as a primary anthropogenic contributor to global warming, and estimated a CO_2 doubling [i.e.,

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[69] AMERICAN PETROLEUM INSTITUTE, CLIMATE MODELS AND CO_2 WARMING: A SELECTIVE REVIEW AND SUMMARY (Columbia University, Mar. 1982), https://assets.documentcloud.org/documents/2805626/1982-API-Climate-Models-and-CO2-Warming-a.pdf.

[70] *See* Memorandum from Roger W. Cohen, Exxon Research and Engineering Co., to A.M. Natkin, Exxon Corp. Office of Science and Technology, CLIMATEFILES (Sept. 2, 1982), http://www.climatefiles.com/exxonmobil/1982-exxon-memo-summarizing-climate-modeling-and-co2-greenhouse-effect-research (discussing research articles and summarizing the findings of research in climate modeling).

[71] Memorandum from M.B. Glaser, *CO_2 "Greenhouse" Effect*, Exxon Research and Engineering Company (Nov. 12, 1982), https://insideclimatenews.org/sites/default/files/documents/1982%20Exxon%20Primer%20on%20CO2%20Greenhouse%20Effect.pdf.

580 ppm] by 2070 with a "Most Probable Temperature Increase" of more than 2°C over the 1979 level, as shown in the Figure below.

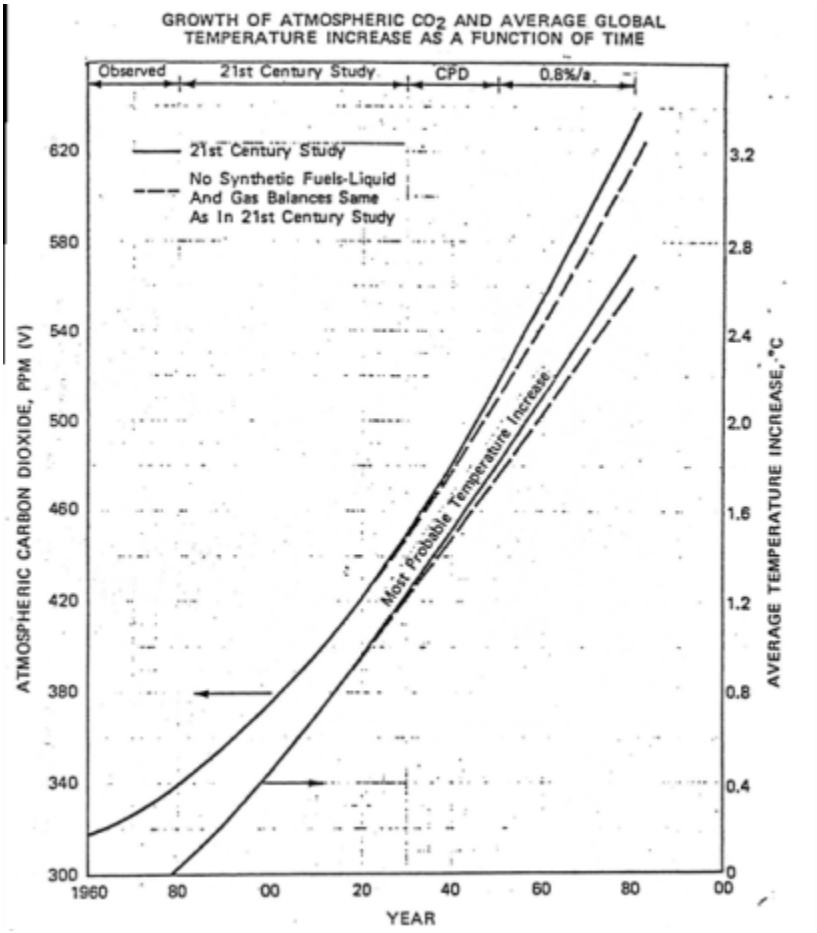

Figure 5: Exxon's internal prediction of future carbon dioxide increase and global warming from 1982.[72]

[72] *Id*. The company predicted a doubling of atmospheric carbon dioxide concentrations above pre-industrial levels by around 2070 (left curve), with a temperature increase of more than 2°C over the 1979 level (right curve). The same document indicated that Exxon estimated that by 1979 a global warming effect of approximately 0.25°C may already have occurred.

The report also warned of "uneven global distribution of increased rainfall and increased evaporation," that "disturbances in the existing global water distribution balance would have dramatic impact on soil moisture, and in turn, on agriculture," and that the American Midwest would dry out. In addition to effects on global agriculture, the report stated, "there are some potentially catastrophic effects that must be considered." Melting of the Antarctic ice sheet could result in global sea level rise of five meters, which would "cause flooding on much of the U.S. East Coast, including the state of Florida and Washington, D.C." Weeds and pests would "tend to thrive with increasing global temperature." The primer warned of "positive feedback mechanisms" in polar regions, which could accelerate global warming, such as deposits of peat "containing large reservoirs of organic carbon" becoming "exposed to oxidation" and releasing their carbon into the atmosphere. "Similarly," the primer warned, "thawing might also release large quantities of carbon currently sequestered as methane hydrates" on the sea floor. "All biological systems would be affected," and "the most severe economic effects could be on agriculture." The report recommended studying "soil erosion, salinization, or the collapse of irrigation systems" in order to understand how society might be affected and might respond to global warming, as well as "[h]ealth effects" and "stress associated with climate related famine or migration[.]" The report estimated that undertaking "[s]ome adaptive measures" (not all of them) would cost "a few percent of the gross national

product estimated in the middle of the next century" (i.e., $400 billion in 2018).[73] To avoid such impacts, the report discussed an analysis from the Massachusetts Institute of Technology and Oak Ridge National Laboratory, which studied energy alternatives and requirements for introducing them into widespread use, and which recommended that "vigorous development of non-fossil energy sources be initiated as soon as possible."[74] The primer also noted that other greenhouse gases related to fossil fuel production, such as methane, would contribute significantly to global warming, and that concerns over carbon dioxide would be reduced if fossil fuel use were decreased due to "high price, scarcity, [or] unavailability." "Mitigation of the 'greenhouse effect' would require major reductions in fossil fuel combustion," the primer stated. The primer was widely distributed to Exxon leadership.

89. In September 1982, the Director of Exxon's Theoretical and Mathematical Sciences Laboratory, Roger Cohen, wrote Alvin Natkin of Exxon's Office of Science and Technology to summarize Exxon's internal research on

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[73] *See Gross National Product*, FEDERAL RESERVE BANK OF ST. LOUIS (updated Mar. 26, 2020), https://fred.stlouisfed.org/series/GNPA.

[74] Memorandum from M.B. Glaser, *CO_2 "Greenhouse" Effect"*, Exxon Research and Engineering Company (Nov. 12, 1982), https://insideclimatenews.org/sites/default/files/documents/1982%20Exxon%20Primer%20on%20CO2%20Greenhouse%20Effect.pdf.

climate modeling.[75] Cohen reported:

> [O]ver the past several years a clear scientific consensus has emerged regarding the expected climatic effects of increased atmospheric CO_2. The consensus is that a doubling of atmospheric CO_2 from its pre-industrial revolution value would result in an average global temperature rise of (3.0 ± 1.5) °C. […] The temperature rise is predicted to be distributed nonuniformly over the earth, with above-average temperature elevations in the polar regions and relatively small increases near the equator. There is unanimous agreement in the scientific community that a temperature increase of this magnitude would bring about significant changes in the earth's climate, including rainfall distribution and alterations of the biosphere. The time required for doubling of atmospheric CO_2 depends on future world consumption of fossil fuels.

Cohen described Exxon's own climate modeling experiments, reporting that they produced "a global average temperature increase that falls well within the range of the scientific consensus," were "consistent with the published predictions of more complex climate models," and were "also in agreement with estimates of the global temperature distribution during a certain prehistoric period when the earth was much warmer than today." "In summary," Cohen wrote, "the results of our research are in accord with the scientific consensus on the effect of increased atmospheric CO_2 on climate." Cohen noted that the results would be presented to the scientific

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[75] Memorandum from Roger W. Cohen, Exxon Research and Engineering Co., to A.M. Natkin, Exxon Corp. Office of Science and Technology, CLIMATEFILES (Sept. 2, 1982), http://www.climatefiles.com/exxonmobil/1982-exxon-memo-summarizing-climate-modeling-and-co2-greenhouse-effect-research.

community by Exxon's collaborator Martin Hoffert at a Department of Energy meeting, as well as by Exxon's Brian Flannery at the Exxon-supported Ewing Symposium, later that year.

90. In October 1982, at the fourth biennial Maurice Ewing Symposium at the Lamont-Doherty Geophysical Observatory which was attended by members of API and Exxon Research and Engineering Company, the Observatory's president E.E. David delivered a speech titled: "Inventing the Future: Energy and the CO_2 'Greenhouse Effect.'"[76] His remarks included the following statement: "Few people doubt that the world has entered an energy transition away from dependence upon fossil fuels and toward some mix of renewable resources that will not pose problems of CO_2 accumulation." He went on, discussing the human opportunity to address anthropogenic climate change before the point of no return:

> It is ironic that the biggest uncertainties about the CO_2 buildup are not in predicting what the climate will do, but in predicting what people will do. . . . It appears we still have time to generate the wealth and knowledge we will need to invent the transition to a stable energy system.

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[76] Dr. E.E. David, Jr., President, Exxon Research and Engineering Co., Remarks at the Fourth Annual Ewing Symposium, Tenafly, NJ, CLIMATEFILES (Oct. 26, 1982), http://www.climatefiles.com/exxonmobil/inventing-future-energy-co2-greenhouse-effect.

91. Throughout the early 1980s, at Exxon's direction, Exxon climate scientist Henry Shaw forecasted emissions of CO_2 from fossil fuel use. Those estimates were incorporated into Exxon's 21st century energy projections and were distributed among Exxon's various divisions. Shaw's conclusions included an expectation that atmospheric CO_2 concentrations would double in 2090 per the Exxon model, with an attendant 2.3–5.6°F average global temperature increase. Shaw compared his model results to those of the EPA, the National Academy of Sciences, and the Massachusetts Institute of Technology, indicating that the Exxon model predicted a longer delay than any of the other models, although its temperature increase prediction was in the mid-range of the four projections.[77]

92. During the 1980s, many Defendants formed their own research units focused on climate modeling. API, including the API CO_2 Task Force, provided a forum for Fossil Fuel Defendants to share their research efforts and corroborate their findings related to anthropogenic greenhouse gas emissions.[78]

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[77] Neela Banerjee, *More Exxon Documents Show How Much It Knew About Climate 35 Years Ago*, INSIDE CLIMATE NEWS (Dec. 1, 2015), https://insideclimatenews.org/news/01122015/documents-exxons-early-co2-position-senior-executives-engage-and-warming-forecast.

[78] Neela Banerjee, *Exxon's Oil Industry Peers Knew About Climate Dangers in the 1970s, Too*, INSIDE CLIMATE NEWS (Dec. 22, 2015), https://insideclimatenews.org/news/22122015/exxon-mobil-oil-industry-peers-knew-about-climate-change-dangers-1970s-american-petroleum-institute-api-shell-chevron-texaco.

93. During this time, Defendants' statements expressed an understanding of their obligation to consider and mitigate the externalities of unabated promotion, marketing, and sale of their fossil fuel products. For example, in 1988, Richard Tucker, the president of Mobil Oil, presented at the American Institute of Chemical Engineers National Meeting, the premier educational forum for chemical engineers, where he stated:

> [H]umanity, which has created the industrial system that has transformed civilization, is also responsible for the environment, which sometimes is at risk because of unintended consequences of industrialization. . . . Maintaining the health of this life-support system is emerging as one of the highest priorities. . . . [W]e must all be environmentalists.
>
> The environmental covenant requires action on many fronts . . . the low-atmosphere ozone problem, the upper-atmosphere ozone problem and the greenhouse effect, to name a few. . . . Our strategy must be to reduce pollution before it is ever generated—to prevent problems at the source.
>
> Prevention means engineering a new generation of fuels, lubricants and chemical products. . . . Prevention means designing catalysts and processes that minimize or eliminate the production of unwanted byproducts. . . . Prevention on a global scale may even require a dramatic reduction in our dependence on fossil fuels—and a shift towards solar, hydrogen, and safe nuclear power. It may be possible that—just possible—that the energy industry will transform itself so completely that observers will declare it a new industry. . . . Brute

> force, low-tech responses and money alone won't meet the challenges we face in the energy industry.[79]

94. Also in 1988, the Shell Greenhouse Effect Working Group issued a confidential internal report, "The Greenhouse Effect," which acknowledged global warming's anthropogenic nature: "Man-made carbon dioxide released into and accumulated in the atmosphere is believed to warm the earth through the so-called greenhouse effect." The authors also noted the burning of fossil fuels as a primary driver of CO_2 buildup and warned that warming would "create significant changes in sea level, ocean currents, precipitation patterns, regional temperature and weather." They further pointed to the potential for "direct operational consequences" of sea level rise on "offshore installations, coastal facilities and operations (e.g. platforms, harbors, refineries, depots)."[80]

95. Similar to early warnings by Exxon scientists, the Shell report notes that "by the time the global warming becomes detectable it could be too late to take effective countermeasures to reduce the effects or even to stabilise the situation."

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[79] Richard E. Tucker, *High Tech Frontiers in the Energy Industry: The Challenge Ahead*, AIChE National Meeting (Nov. 30, 1988), https://hdl.handle.net/2027/pur1.32754074119482?urlappend=%3Bseq=522.

[80] SHELL INTERNATIONALE PETROLEUM, GREENHOUSE EFFECT WORKING GROUP, THE GREENHOUSE EFFECT (May 1988), https://www.documentcloud.org/documents/4411090-Document3.html#document/p9/a411239.

The authors mention the need to consider policy changes on multiple occasions, noting that "the potential implications for the world are . . . so large that policy options need to be considered much earlier" and that research should be "directed more to the analysis of policy and energy options than to studies of what we will be facing exactly."

96. In 1989, Esso Resources Canada (ExxonMobil) commissioned a report on the impacts of climate change on existing and proposed natural gas facilities in the Mackenzie River Valley and Delta, including extraction facilities on the Beaufort Sea and a pipeline crossing Canada's Northwest Territory.[81] It reported that "large zones of the Mackenzie Valley could be affected dramatically by climatic change" and that "the greatest concern in Norman Wells [oil town in North West Territories, Canada] should be the changes in permafrost that are likely to occur under conditions of climate warming."[82] The report concluded that, in light of climate models showing a "general tendency towards warmer and wetter climate," operation of those facilities would be compromised by increased precipitation, increase in air temperature, changes in permafrost conditions, and significantly, sea level rise and

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[81] *See* Stephen Lonergan & Kathy Young, *An Assessment of the Effects of Climate Warming on Energy Developments in the Mackenzie River Valley and Delta, Canadian Arctic*, 7 ENERGY EXPLORATION & EXPLOITATION 359–81 (1989).

[82] *Id.* at 369, 376.

erosion damage.[83] The authors recommended factoring those eventualities into future development planning and also warned that "a rise in sea level could cause increased flooding and erosion damage on Richards Island."

97. Ken Croasdale, a senior ice researcher for Exxon's subsidiary Imperial Oil, stated to an audience of engineers in 1991 that greenhouse gases are rising "due to the burning of fossil fuels. Nobody disputes this fact."[84]

98. Also in 1991, Shell produced a film called "Climate of Concern." The film advises that while "no two [climate change projection] scenarios fully agree, . . . [they] have each prompted the same serious warning. A warning endorsed by a uniquely broad consensus of scientists in their report to the UN at the end of 1990." The warning was an increasing frequency of abnormal weather, and of sea level rise of about one meter over the coming century. Shell specifically described the impacts of anthropogenic sea level rise on tropical islands, "barely afloat even now, . . . [f]irst made uninhabitable and then obliterated beneath the waves. Wetland habitats destroyed by intruding salt. Coastal lowlands suffering pollution of precious groundwater." It warned of "greenhouse refugees," people who abandoned homelands inundated by the sea, or displaced because of catastrophic changes to the

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[83] *Id.* at 360, 377–78.

[84] RONALD C. KRAMER, CARBON CRIMINALS, CLIMATE CRIMES 66 (1st ed. 2020).

environment. The video concludes with a stark admonition: "Global warming is not yet certain, but many think that the wait for final proof would be irresponsible. Action now is seen as the only safe insurance."[85]

99. Also in 1991, BP released a short film called "The Earth – What Makes Weather?" In it, a narrator states: "Our . . . dependence on carbon-based fuels is now a cause for concern. When coal, oil or gas are burned, they release carbon dioxide and other reactive gases." The narrator then goes on to explain:

> As the earth gives off heat, carbon dioxide, together with water vapor, absorbs and radiates it back, acting like a blanket. . . . If world population growth is matched by energy consumption, even more carbon dioxide will be released, making this greenhouse effect even stronger. An overall increase in temperature of even a few degrees could disrupt our climate with devastating consequences. If the oceans got warmer and the ice sheets began to melt, sea levels would rise, encroaching on coastal lowlands. From warmer seas, more water would evaporate, making storms and the havoc they cause more frequent. . . . Catastrophic floods could become commonplace, and low-lying countries like Bangladesh would be defenseless against them. Too much water or too little. Away from the coasts we could see a return to the conditions which devastated America's Midwest in the 1930s. Global warming could repeat on a more disastrous scale the dustbowl phenomenon which virtually destroyed farming on the Great

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[85] Jelmer Mommers, *Shell Made a Film About Climate Change in 1991 (Then Neglected To Heed Its Own Warning)*, DE CORRESPONDENT (Feb. 27, 2017), https://thecorrespondent.com/6285/shell-made-a-film-about-climate-change-in-1991-then-neglected-to-heed-its-own-warning.

> Plains. . . . The threat of such climatic change is now one of our most urgent concerns.[86]

The film was not widely distributed.

100. The fossil fuel industry was at the forefront of carbon dioxide research for much of the latter half of the 20th century. It developed cutting edge and innovative technology and worked with many of the field's top researchers to produce exceptionally sophisticated studies and models. For instance, in the mid-nineties Shell began using scenarios to plan how the company could respond to various global forces in the future. In one scenario published in a 1998 internal report, Shell paints an eerily prescient scene:

> In 2010, a series of violent storms causes extensive damage to the eastern coast of the U.S. Although it is not clear whether the storms are caused by climate change, people are not willing to take further chances. The insurance industry refuses to accept liability, setting off a fierce debate over who is liable: the insurance industry or the government. After all, two successive IPCC reports since 1993 have reinforced the human connection to climate change . . . Following the storms, a coalition of environmental NGOs brings a class-action suit against the US government and fossil-fuel companies on the grounds of neglecting what scientists (including their own) have been saying for years: that something must be done. A social reaction to the use of fossil fuels grows, and individuals become 'vigilante environmentalists' in the same way, a generation earlier, they had

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[86] Vatan Hüzeir, *BP Knew the Truth About Climate Change 30 Years Ago*, FOLLOW THE MONEY (May 26, 2020), https://www.ftm.nl/artikelen/bp-video-climate-change-1990-engels; *see also* BP Video Library, *This Earth – What Makes Weather?* (1991), https://www.bpvideolibrary.com/record/463.

> become fiercely anti-tobacco. Direct-action campaigns against companies escalate. Young consumers, especially, demand action.[87]

101. Fossil fuel companies did not just consider climate change impacts in scenarios. In the mid-1990s, ExxonMobil, Shell, and Imperial Oil (ExxonMobil) jointly undertook the Sable Offshore Energy Project in Nova Scotia. The project's own Environmental Impact Statement declared: "The impact of a global warming sea-level rise may be particularly significant in Nova Scotia. The long-term tide gauge records at a number of locations along the N.S. coast have shown sea level has been rising over the past century. . . . For the design of coastal and offshore structures, an estimated rise in water level, due to global warming, of 0.5 m [1.64 feet] may be assumed for the proposed project life (25 years)."[88]

102. Climate change research conducted by Defendants and their industry associations frequently acknowledged uncertainties in their climate modeling—those uncertainties, however, were merely with respect to the magnitude and timing of climate impacts resulting from fossil fuel consumption, not that significant changes would eventually occur. Defendants' researchers and the researchers at

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[87] ROYAL DUTCH/SHELL GROUP, GROUP SCENARIOS 1998–2020 115, 122 (1998), http://www.documentcloud.org/documents/4430277-27-1-Compiled.html.

[88] EXXONMOBIL, SABLE PROJECT DEVELOPMENT PLAN, vol. 3, 4-77, http://soep.com/about-the-project/development-plan-application.

their industry associations harbored little doubt that climate change was occurring and that fossil fuel products were, and are, the primary cause.

103. Despite the overwhelming information about the threats to people and the planet posed by continued unabated use of their fossil fuel products, Fossil Fuel Defendants failed to act as they reasonably should have to mitigate or avoid those dire adverse impacts. Fossil Fuel Defendants instead adopted the position, as described below, that they had a license to continue the unfettered pursuit of profits from those products. This position was an abdication of Fossil Fuel Defendants' responsibility to consumers and the public, including the State, to act on their unique knowledge of the reasonably foreseeable hazards of unabated production and consumption of their fossil fuel products.

C. Defendants Did Not Disclose Known Harms Associated with the Extraction, Promotion, and Consumption of Their Fossil Fuel Products, and Instead Affirmatively Acted to Obscure Those Harms and Engaged in a Campaign to Deceptively Protect and Expand the Use of their Fossil Fuel Products.

104. By 1988, Defendants had amassed a compelling body of knowledge about the role of anthropogenic greenhouse gases, and specifically those emitted from the normal use of Defendants' fossil fuel products, in causing global warming and its cascading impacts, including disruptions to the hydrologic cycle, extreme precipitation and drought, heatwaves, and associated consequences for human communities and the environment. On notice that their products were causing global

climate change and dire effects on the planet, Defendants faced the decision of whether or not to take steps to limit the damages their fossil fuel products were causing and would continue to cause Earth's inhabitants, including the people of Delaware.

105. Before or thereafter, Fossil Fuel Defendants could and reasonably should have taken any number of steps to mitigate the damages caused by their fossil fuel products, and their own comments reveal an awareness of what some of those steps should have been. Fossil Fuel Defendants should have warned the public, regulators, and Delaware consumers of the dangers known to Defendants of the unabated consumption of their fossil fuel products, and they could and should have taken reasonable steps to limit the potential greenhouse gas emissions arising out of their fossil fuel products.

106. But several key events during the period 1988–1992 appear to have prompted Defendants to change their tactics from general research and internal discussion on climate change to a public campaign aimed at deceiving consumers and the public, including those in Delaware, and evading regulation of their fossil fuel products and/or emissions therefrom. These include:

a. In 1988, National Aeronautics and Space Administration (NASA) scientists confirmed that human activities were actually contributing to

global warming.[89] On June 23rd of that year, NASA scientist James Hansen's presentation of this information to Congress engendered significant news coverage and publicity for the announcement, including coverage on the front page of the New York Times.

b. On July 28, 1988, Senator Robert Stafford and four bipartisan co-sponsors introduced S. 2666, "The Global Environmental Protection Act," to regulate CO_2 and other greenhouse gases. Four more bipartisan bills to significantly reduce CO_2 pollution were introduced over the following ten weeks, and in August, U.S. Presidential candidate George H.W. Bush pledged that his presidency would combat the greenhouse effect with "the White House effect."[90] Political will in the United States to reduce anthropogenic greenhouse gas emissions and mitigate the harms associated with Defendants' fossil fuel products was gaining momentum.

c. In December 1988, the United Nations formed the Intergovernmental Panel on Climate Change (IPCC), a scientific panel dedicated to providing the world's governments with an objective, scientific analysis of climate change and its environmental, political, and economic impacts.

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[89] *See* Peter C. Frumhoff et al., *The Climate Responsibilities of Industrial Carbon Producers*, 132 CLIMATIC CHANGE 161 (2015).

[90] *The White House and the Greenhouse*, N.Y. TIMES (May 9, 1989), http://www.nytimes.com/1989/05/09/opinion/the-white-house-and-the-greenhouse.html.

d. In 1990, the IPCC published its First Assessment Report on anthropogenic climate change,[91] in which it concluded that (1) "there is a natural greenhouse effect which already keeps the Earth warmer than it would otherwise be," and (2) that

> emissions resulting from human activities are substantially increasing the atmospheric concentrations of the greenhouse gases carbon dioxide, methane, chlorofluorocarbons (CFCs) and nitrous oxide. These increases will enhance the greenhouse effect, resulting on average in an additional warming of the Earth's surface. The main greenhouse gas, water vapour, will increase in response to global warming and further enhance it.[92]

The IPCC reconfirmed those conclusions in a 1992 supplement to the First Assessment report.[93]

e. The United Nations began preparing for the 1992 Earth Summit in Rio de Janeiro, Brazil, a major, newsworthy gathering of 172 world governments, of which 116 sent their heads of state. The Summit resulted in the United Nations Framework Convention on Climate Change (UNFCCC), an international environmental treaty providing protocols for future negotiations aimed at

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[91] *See* IPCC, *Reports*, ipcc.ch/reports.

[92] IPCC, CLIMATE CHANGE: THE IPCC SCIENTIFIC ASSESSMENT xi (1990), https://www.ipcc.ch/report/climate-change-the-ipcc-1990-and-1992-assessments.

[93] IPCC, 1992 IPCC SUPPLEMENT TO THE FIRST ASSESSMENT REPORT (1992), https://www.ipcc.ch/report/climate-change-the-ipcc-1990-and-1992-assessments.

"stabiliz[ing] greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."[94]

107. Those world events marked a shift in public discussion of climate change, and the initiation of international efforts to curb anthropogenic greenhouse emissions—developments that had stark implications for, and would have diminished the profitability of, Defendants' fossil fuel products.

108. Rather than collaborating with the international community by acting to forestall, or at least decrease, their fossil fuel products' contributions to global warming, and its impacts, including sea level rise, disruptions to the hydrologic cycle, and associated consequences to Delaware and other communities, Defendants embarked on a decades-long campaign designed to maximize continued dependence on their products and undermine national and international efforts to rein in greenhouse gas emissions.

109. Defendants' campaign, which focused on concealing, discrediting, and/or misrepresenting information that tended to support restricting consumption of (and thereby decreasing demand for) Defendants' fossil fuel products, took several forms. The campaign enabled Defendants to accelerate their business

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[94] UNITED NATIONS, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE Art. 2 (1992), https://unfccc.int/resource/docs/convkp/conveng.pdf.

practice of exploiting fossil fuel reserves, and concurrently externalize the social and environmental costs of their fossil fuel products. Those activities stood in direct contradiction to Defendants' own prior recognition that the science of anthropogenic climate change was clear and that action was needed to avoid or mitigate dire consequences to the planet and communities like the State's.

110. Defendants—on their own and jointly through industry and front groups such as API and the GCC—funded, conceived, planned, and carried out a sustained and widespread campaign of denial and disinformation about the existence of climate change and their products' contribution to it. The campaign included a long-term pattern of direct misrepresentations and material omissions to consumers, as well as a plan to influence consumers indirectly by affecting public opinion through the dissemination of misleading research to the press, government, and academia. Although Fossil Fuel Defendants were competitors in the marketplace, they combined and collaborated on this public campaign to misdirect and stifle public knowledge in order to increase sales and protect profits. The effort included promoting their hazardous products through advertising campaigns that failed to warn of the existential risks associated with the use of those products, and were designed to influence consumers to continue using Defendants' fossil fuel products irrespective of those products' damage to communities and the environment.

111. For example, in 1988, Joseph Carlson, an Exxon public affairs manager, stated in an internal memo that Exxon "is providing leadership through API in developing the petroleum industry position" on "the greenhouse effect."[95] He then went on to describe the "Exxon Position," which included two important messaging tenets among others: (1) "[e]mphasize the uncertainty in scientific conclusions regarding the potential enhanced Greenhouse Effect"; and (2) "[r]esist the overstatement and sensationalization [sic] of potential greenhouse effect which could lead to noneconomic development of non-fossil fuel resources."[96]

112. Reflecting on his time as an Exxon consultant in the 1980s, Professor Martin Hoffert, a former New York University physicist who researched climate change, expressed regret over Exxon's "climate science denial program campaign" in his sworn testimony before Congress:

> [O]ur research [at Exxon] was consistent with findings of the United Nations Intergovernmental Panel on Climate Change on human impacts of fossil fuel burning, which is that they are increasingly having a perceptible influence on Earth's climate. . . . If anything, adverse climate change from elevated CO2 is proceeding faster than the average of the prior IPCC mild projections and fully consistent with what we knew back in the early 1980's at Exxon. . . . I was greatly distressed by the climate science denial program campaign that Exxon's front office launched around the time I stopped working as a consultant—but not

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[95] Memorandum from Joseph M. Carlson, *The Greenhouse Effect* (Aug. 3, 1988), https://assets.documentcloud.org/documents/3024180/1998-Exxon-Memo-on-the-Greenhouse-Effect.pdf.

[96] *Id.*

> collaborator—for Exxon. The advertisements that Exxon ran in major newspapers raising doubt about climate change were contradicted by the scientific work we had done and continue to do. Exxon was publicly promoting views that its own scientists knew were wrong, and we knew that because we were the major group working on this.[97]

113. A 1994 Shell report entitled "The Enhanced Greenhouse Effect: A Review of the Scientific Aspects" by Royal Dutch Shell environmental advisor Peter Langcake stands in stark contrast to the company's 1988 report on the same topic. Whereas before, the authors recommended consideration of policy solutions early on, Langcake warned of the potentially dramatic "economic effects of ill-advised policy measures." While the report recognized the IPCC conclusions as the mainstream view, Langcake still emphasized scientific uncertainty, noting, for example, that "the postulated link between any observed temperature rise and human activities has to be seen in relation to natural variability, which is still largely unpredictable." The Shell Group position is stated clearly in the report: "Scientific uncertainty and the evolution of energy systems indicate that policies to curb

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[97] *Examining the Oil Industry's Efforts to Suppress the Truth About Climate Change, Hearing Before the Subcomm. on Civil Rights and Civil Liberties of the Comm. on Oversight and Reform*, 116th Cong. 7–8 (Oct. 23, 2019) (statement of Martin Hoffert, Former Exxon Consultant, Professor Emeritus, Physics, New York University), https://oversight.house.gov/legislation/hearings/examining-the-oil-industry-s-efforts-to-suppress-the-truth-about-climate-change.

greenhouse gas emissions beyond 'no regrets' measures could be premature, divert resources from more pressing needs and further distort markets."[98]

114. In 1991, for example, the Information Council for the Environment ("ICE"), whose members included affiliates, predecessors and/or subsidiaries of Defendants, launched a national climate change science denial campaign with full-page newspaper ads, radio commercials, a public relations tour schedule, "mailers," and research tools to measure campaign success. Included among the campaign strategies was to "reposition global warming as theory (not fact)." Its target audience included older less-educated males who are "predisposed to favor the ICE agenda, and likely to be even more supportive of that agenda following exposure to new info."[99]

115. A goal of ICE's advertising campaign was to change public opinion and avoid regulation. A memo from Richard Lawson, president of the National Coal Association, a predecessor to the National Mining Association, asked members to

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[98] P. LANGCAKE, SHELL INTERNATIONALE PETROLEUM, THE ENHANCED GREENHOUSE EFFECT: A REVIEW OF THE SCIENTIFIC ASPECTS (Dec. 1994), https://www.documentcloud.org/documents/4411099-Document11.html#document/p15/a411511.

[99] Union of Concerned Scientists, *Deception Dossier #5: Coal's "Information Council on the Environment" Sham* (1991), http://www.ucsusa.org/sites/default/files/attach/2015/07/Climate-Deception-Dossier-5_ICE.pdf.

contribute to the ICE campaign with the justification that "policymakers are prepared to act [on global warming]. Public opinion polls reveal that 60% of the American people already believe global warming is a serious environmental problem. Our industry cannot sit on the sidelines in this debate."[100]

116. The following images are examples of ICE-funded print advertisements challenging the validity of climate science and intended to obscure the scientific consensus on anthropogenic climate change and induce political inertia to address it.[101]

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[100] Naomi Oreskes, *My Facts Are Better Than Your Facts: Spreading Good News About Global Warming* (2010), in PETER HOWLETT ET AL., HOW WELL DO FACTS TRAVEL?: THE DISSEMINATION OF RELIABLE KNOWLEDGE 136–66 (Cambridge University Press, 2011).

[101] Union of Concerned Scientists, *Deception Dossier #5: Coal's "Information Council on the Environment" Sham* at 47-49 (1991), http://www.ucsusa.org/sites/default/files/attach/2015/07/Climate-Deception-Dossier-5_ICE.pdf.

Figure 6: Information Council for the Environment Advertisements

117. In 1996, Exxon released a publication called "Global Warming: Who's Right? Facts about a debate that's turned up more questions than answers." In the publication's preface, Exxon CEO Lee Raymond inaccurately stated that "taking drastic action immediately is unnecessary since many scientists agree there's ample time to better understand the climate system." The publication described the greenhouse effect as "unquestionably real and definitely a good thing," while ignoring the severe consequences that would result from the influence of the increased CO_2 concentration on the Earth's climate. Instead, it characterized the greenhouse effect as simply "what makes the earth's atmosphere livable." Directly contradicting Exxon's own knowledge and peer-reviewed science, the publication ascribed the rise in temperature since the late 19th century to "natural fluctuations

that occur over long periods of time" rather than to the anthropogenic emissions that Exxon itself and other scientists had confirmed were responsible. The publication also falsely challenged the computer models that projected the future impacts of unabated fossil fuel product consumption, including those developed by Exxon's own employees, as having been "proved to be inaccurate." The publication contradicted the numerous reports prepared by and circulated among Exxon's staff, and by the API, stating that "the indications are that a warmer world would be far more benign than many imagine . . . moderate warming would reduce mortality rates in the US, so a slightly warmer climate would be more healthful." Raymond concluded his preface by attacking advocates for limiting the use of his company's fossil fuel products as "drawing on bad science, faulty logic, or unrealistic assumptions"—despite the important role that Exxon's own scientists had played in compiling those same scientific underpinnings.[102]

118. API published an extensive report in the same year warning against concern over CO_2 buildup and any need to curb consumption or regulate the fossil fuel industry. The introduction stated that "there is no persuasive basis for forcing Americans to dramatically change their lifestyles to use less oil." The authors

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[102] EXXON CORP., GLOBAL WARMING: WHO'S RIGHT? (1996), https://www.documentcloud.org/documents/2805542-Exxon-Global-Warming-Whos-Right.html.

discouraged the further development of certain alternative energy sources, writing that "government agencies have advocated the increased use of ethanol and the electric car, without the facts to support the assertion that either is superior to existing fuels and technologies" and that "policies that mandate replacing oil with specific alternative fuel technologies freeze progress at the current level of technology, and reduce the chance that innovation will develop better solutions." The paper also denied the human connection to climate change, by falsely stating that no "scientific evidence exists that human activities are significantly affecting sea levels, rainfall, surface temperatures or the intensity and frequency of storms." The report's message was false but clear: "Facts don't support the arguments for restraining oil use."[103]

119. In a speech presented at the World Petroleum Congress in Beijing in 1997 at which many of the Defendants were present, Exxon CEO Lee Raymond reiterated those views. This time, he presented a false dichotomy between stable energy markets and abatement of the marketing, promotion, and sale of fossil fuel products Defendants knew to be hazardous. He stated:

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[103] SALLY BRAIN GENTILLE ET AL., AMERICAN PETROLEUM INSTITUTE, REINVENTING ENERGY: MAKING THE RIGHT CHOICES (1996), http://www.climatefiles.com/trade-group/american-petroleum-institute/1996-reinventing-energy.

> Some people who argue that we should drastically curtail our use of fossil fuels for environmental reasons . . . my belief [is] that such proposals are neither prudent nor practical. With no readily available economic alternatives on the horizon, fossil fuels will continue to supply most of the world's and this region's energy for the foreseeable future.
>
> Governments also need to provide a stable investment climate . . . They should avoid the temptation to intervene in energy markets in ways that give advantage to one competitor over another or one fuel over another.
>
> We also have to keep in mind that most of the greenhouse effect comes from natural sources . . . Leaping to radically cut this tiny sliver of the greenhouse pie on the premise that it will affect climate defies common sense and lacks foundation in our current understanding of the climate system.
>
> Let's agree there's a lot we really don't know about how climate will change in the 21st century and beyond . . . It is highly unlikely that the temperature in the middle of the next century will be significantly affected whether policies are enacted now or 20 years from now. It's bad public policy to impose very costly regulations and restrictions when their need has yet to be proven.[104]

120. Imperial Oil (ExxonMobil) CEO Robert Peterson falsely denied the established connection between Defendants' fossil fuel products and anthropogenic climate change in the Summer 1998 Imperial Oil Review, "A Cleaner Canada:"

> [T]his issue [referring to climate change] has absolutely nothing to do with pollution and air quality. Carbon dioxide is not a pollutant but an essential ingredient of life on this planet. . . . [T]he question of whether

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[104] Lee R. Raymond, Chairman and Chief Executive Officer, Exxon Corp., Address at the World Petroleum Congress (Oct. 13, 1997), https://assets.documentcloud.org/documents/2840902/1997-Lee-Raymond-Speech-at-China-World-Petroleum.pdf.

> or not the trapping of 'greenhouse' gases will result in the planet's getting warmer . . . has no connection whatsoever with our day-to-day weather.
>
> There is absolutely no agreement among climatologists on whether or not the planet is getting warmer, or, if it is, on whether the warming is the result of man-made factors or natural variations in the climate. . . . I feel very safe in saying that the view that burning fossil fuels will result in global climate change remains an unproved hypothesis.[105]

121. Mobil (ExxonMobil) paid for a series of "advertorials," advertisements located in the editorial section of the New York Times and meant to look like editorials rather than paid ads. Those ads discussed various aspects of the public discussion of climate change and sought to undermine the justifications for tackling greenhouse gas emissions as unsettled science. The 1997 advertorial below[106] argued that economic analysis of emissions restrictions was faulty and inconclusive and therefore a justification for delaying action on climate change.

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[105] Robert Peterson, *A Cleaner Canada* in IMPERIAL OIL REVIEW (1998), https://www.desmogblog.com/sites/beta.desmogblog.com/files/A%20Cleaner%20Canada%20Imperial%20Oil.pdf.

[106] Mobil, *When Facts Don't Square with the Theory, Throw Out the Facts*, N.Y. TIMES, A31 (Aug.14, 1997), https://www.documentcloud.org/documents/705550-mob-nyt-1997-aug-14-whenfactsdontsquare.html.

But when we no longer allow those choices, both civility and common sense will have been diminished. □

who was dragged from his sister's car by police officers and shot in the face at point-blank range. The cops who have the power to do something about those officers, but choose not to. □

When facts don't square with the theory, throw out the facts

That seems to characterize the administration's attitude on two of its own studies which show that international efforts to curb global warming could spark a big run-up in energy prices.

For months, the administration—playing its cards close to the vest—has promised to provide details of the emission reduction plan it will put on the table at the climate change meeting in Kyoto, Japan, later this year. It also promised to evaluate the economics of that policy and measure its impact. Those results are important because the proposals submitted by other countries thus far would be disruptive and costly to the U.S. economy.

Yet, when the results from its own economic models were finally generated, the administration started distancing itself from the findings and models that produced them. The administration's top economic advisor said that economic models can't provide a "definitive answer" on the impact of controlling emissions. The effort, she said, was "futile." At best, the models can only provide a "range of potential impacts."

Frankly, we're puzzled. The White House has promised to lay the economic facts before the public. Yet, the administration's top advisor said such an analysis won't be based on models and it will "preclude . . . detailed numbers." If you don't provide numbers and don't rely on models, what kind of rigorous economic examination can Congress and the public expect?

We're also puzzled by ambivalence over models. The administration downplays the utility of economic models to forecast cost impacts 10–15 years from now, yet its negotiators accept as gospel the 50–100-year predictions of global warming that have been generated by climate models—many of which have been criticized as seriously flawed.

The second study, conducted by Argonne National Laboratory under a contract with the Energy Department, examined what would happen if the U.S. had to commit to higher energy prices under the emission reduction plans that several nations had advanced last year. Such increases, the report concluded, would result in "significant reductions in output and employment" in six industries—aluminum, cement, chemical, paper and pulp, petroleum refining and steel.

Hit hardest, the study noted, would be the chemical industry, with estimates that up to 30 percent of U.S. chemical manufacturing capacity would move offshore to developing countries. Job losses could amount to some 200,000 in that industry, with another 100,000 in the steel sector. And despite the substantial loss of U.S. jobs and manufacturing capacity, the net emission reduction could be insignificant since developing countries will not be bound by the emission targets of a global warming treaty.

Downplaying Argonne's findings, the Energy Department noted that the study used outdated energy prices (mid-1996), didn't reflect the gains that would come from international emissions trading and failed to factor in the benefits of accelerated developments in energy efficiency and low-carbon technologies.

What it failed to mention is just what these new technologies are and when we can expect their benefits to kick in. As for emissions trading, many economists have theorized about the role they could play in reducing emissions, but few have grappled with the practicality of implementing and policing such a scheme.

We applaud the goals the U.S. wants to achieve in these upcoming negotiations—namely, that a final agreement must be "flexible, cost-effective, realistic, achievable and ultimately global in scope." But until we see the details of the administration's policy, we are concerned that plans are being developed in the absence of rigorous economic analysis. Too much is at stake to simply ignore facts that don't square with preconceived theories.

Mobil The energy to make a difference.

http://www.mobil.com

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Figure 7: 1997 Mobil Advertorial

122. In 1998, API convened a Global Climate Science Communications Team ("GCSCT") whose members included Exxon's senior environmental lobbyist, an API public relations representative, and representatives from Chevron. There were no scientists on the "Global Climate Science Team." Steve Milloy (a key player in the tobacco industry's front group) and his organization The Advancement of Sound Science Coalition ("TASSC") were founding members of the GCSCT. TASSC was a fake grassroots citizen group created by the tobacco industry to sow uncertainty by discrediting the scientific link between exposure to second-hand cigarette smoke and increased rates of cancer and heart disease. Philip Morris launched TASSC on the advice of its public relations firm, which advised Philip Morris that the tobacco company itself would not be a credible voice on the issue of smoking and public health. TASSC, through API and with the approval of Fossil Fuel Defendants, also became a front group for the fossil fuel industry, using the same tactics it had honed while operating on behalf of tobacco companies to spread doubt about climate science. Although TASSC posed as a grassroots group of concerned citizens, it was funded by Defendants. For example, between 2000 and 2004, Exxon donated $50,000 to Milloy's Advancement of Sound Science Center; and an additional $60,000 to the Free Enterprise Education Institute and $50,000 to the Free Enterprise Action Institute, both of which were registered to Milloy's home

address.[107] The GCSCT represented a continuation of Defendants' concerted actions to sow doubt and confusion about climate change in order to further Defendants' business interests.

123. Starting in 1998, the GCSCT continued Defendants' efforts to deceive the public about the dangers of fossil fuel use by launching a campaign to convince the public that the scientific basis for climate change was in doubt. The multi-million-dollar, multi-year plan included, among other elements, plans to: (a) "[d]evelop and implement a national media relations program to inform the media about uncertainties in climate science to generate national, regional, and local media coverage on the scientific uncertainties"; (b) "[d]evelop a global climate science information kit for media including peer-reviewed papers that undercut the 'conventional wisdom' on climate science"; (c) "[p]roduce . . . a steady stream of op-ed columns"; and (d) "[d]evelop and implement a direct outreach program to inform and educate members of Congress . . . and school teachers/students about uncertainties in climate science" to "begin to erect a barrier against further efforts to

[107] UNION OF CONCERNED SCIENTISTS, SMOKE, MIRRORS & HOT AIR: HOW EXXONMOBIL USES BIG TOBACCO'S TACTICS TO MANUFACTURE UNCERTAINTY ON CLIMATE SCIENCE (July 16, 2007), https://www.ucsusa.org/resources/smoke-mirrors-hot-air.

impose Kyoto-like measures in the future"[108]—a blatant attempt to disrupt international efforts to negotiate any treaty curbing greenhouse gas emissions to ensure a continued and unimpeded market for their fossil fuel products.

124. Exxon, Chevron, and API contributed to the development of the plan, which plainly set forth the criteria by which the contributors would know when their efforts to manufacture doubt had been successful. "Victory," they wrote, "will be achieved when . . . average citizens 'understand' (recognize) uncertainties in climate science" and "recognition of uncertainties becomes part of the 'conventional wisdom.'"[109] In other words, the plan was part of Defendants' goal to use disinformation to plant doubt about the reality of climate change in an effort to maintain consumer demand for their fossil fuel products and their large profits.

125. Soon after, API distributed a memo to its members illuminating API's and Fossil Fuel Defendants' concern over the potential regulation of their fossil fuel products: "Climate is at the center of the industry's business interests. Policies limiting carbon emissions reduce petroleum product use. That is why it is API's

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[108] Email from Joe Walker to Global Climate Science Team, *Draft Global Climate Science Communications Plan* (Apr. 3, 1998), https://assets.documentcloud.org/documents/784572/api-global-climate-science-communications-plan.pdf.

[109] *Id*.

highest priority issue and defined as 'strategic.'"[110] Further, the API memo stressed many of the strategies that Defendants collectively utilized to combat the perception of their fossil fuel products as hazardous. They included:

a. Influencing the tenor of the climate change "debate" as a means to establish that greenhouse gas reduction policies like the Kyoto Protocol were not necessary to responsibly address climate change;

b. Maintaining strong working relationships between government regulators and communications-oriented organizations like the Global Climate Coalition, the Heartland Institute, and other groups carrying Defendants' message minimizing the hazards of the unabated use of their fossil fuel products and opposing regulation thereof;

c. Building the case for (and falsely dichotomizing) Defendants' positive contributions to a "long-term approach" (ostensibly for regulation of their products) as a reason for society to reject short term fossil fuel emissions regulations, and engaging in climate change science uncertainty research; and

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[110] *Allegations of Political Interference with Government Climate Change Science*, *Hearing Before the Comm. on Oversight and Government Reform*, 110th Cong. 324 (Mar. 19, 2007) https://ia601904.us.archive.org/25/items/gov.gpo.fdsys.CHRG-110hhrg37415/CHRG-110hhrg37415.pdf.

d. Presenting Defendants' positions on climate change in domestic and international forums, including by preparing rebuttals to IPCC reports.

126. In furtherance of the strategies described in these memoranda, Defendants made misleading statements about climate change, the relationship between climate change and their fossil fuel products, and the urgency of the problem. Defendants made these statements in public fora and in advertisements published in newspapers and other media with substantial circulation to Delaware, including national publications such as the *New York Times*, *Wall Street Journal*, and *Washington Post*.

127. Phillip Cooney, an attorney at API from 1996 to 2001, testified at a 2007 Congressional hearing that it was "typical" for API to fund think tanks and advocacy groups that minimized fossil fuels' role in climate change. Among the groups to which API provided funding were the Heartland Institute, Competitive Enterprise Institute ("CEI"), and the American Council on Capital Formation, each of which issued publications challenging the scientific consensus that fossil fuels were causing climate change and opposed restrictions on Fossil Fuel Defendants' extraction, production, and sale of fossil fuels.[111]

[111] *Id*.

128. Defendants, individually and through trade associations and front groups like API and GCC, mounted a deceptive public campaign against regulation of their business practices in order to continue wrongfully promoting and marketing their fossil fuel products, despite their own knowledge and the growing national and international scientific consensus about the hazards of doing so.

129. The Global Climate Coalition (GCC), on behalf of Defendants and other fossil fuel companies, funded deceptive advertising campaigns and distributed misleading material to generate public uncertainty around the climate debate, with the specific purpose of preventing U.S. adoption of the Kyoto Protocol, despite the leading role that the U.S. had played in the Protocol negotiations.[112] Despite an internal primer stating that various "contrarian theories" (i.e., climate change skepticism) do not "offer convincing arguments against the conventional model of greenhouse gas emission-induced climate change," GCC excluded this section from the public version of the backgrounder[113] and instead funded and promoted some of

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[112] *Id.*

[113] Memorandum from Gregory J. Dana, Assoc. of Int'l Auto. Mfrs., to AIAM Technical Committee, *Global Climate Coalition (GCC) - Primer on Climate Change Science - Final Draft* (Jan. 18, 1996), http://www.webcitation.org/6FyqHawb9.

those same contrarian theories. Between 1989 and 1998, the GCC spent $13 million on advertisements as part of a campaign to cast doubt on climate science.[114]

130. For example, in a 1994 report, the GCC stated that "observations have not yet confirmed evidence of global warming that can be attributed to human activities," that "[t]he claim that serious impacts from climate change have occurred or will occur in the future simply has not been proven," and "[c]onsequently, there is no basis for the design of effective policy action that would eliminate the potential for climate change."[115] In 1995, the GCC published a booklet called "Climate Change: Your Passport to the Facts," which stated, "While many warnings have reached the popular press about the consequences of a potential man-made warming of the Earth's atmosphere during the next 100 years, there remains no scientific evidence that such a dangerous warming will actually occur."[116]

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[114] Wendy E. Franz, Kennedy School of Government, Harvard University, *Science, Skeptics and Non-State Actors in the Greenhouse*, ENRP Discussion Paper E-98-18, at 13 (Sept. 1998), https://www.belfercenter.org/sites/default/files/legacy/files/Science%20Skeptics%20and%20Non-State%20Actors%20in%20the%20Greenhouse%20-%20E-98-18.pdf.

[115] GCC, ISSUES AND OPTIONS: POTENTIAL GLOBAL CLIMATE CHANGE, CLIMATE FILES (1994), http://www.climatefiles.com/denial-groups/global-climate-coalition-collection/1994-potential-global-climate-change-issues.

[116] GCC, CLIMATE CHANGE: YOUR PASSPORT TO THE FACTS, CLIMATE FILES (1995), http://www.climatefiles.com/denial-groups/global-climate-coalition-collection/1995-climate-change-facts-passport.

131. A key strategy in Defendants' efforts to discredit scientific consensus on climate change and the IPCC was to bankroll scientists who, although accredited, held fringe opinions that were even more questionable given the sources of their research funding. Those scientists obtained part or all of their research budget from Fossil Fuel Defendants directly or through Fossil Fuel Defendant-funded organizations like API,[117] but they frequently failed to disclose their fossil fuel industry underwriters.[118] Defendants intended for the research of scientists they funded to be distributed to and relied on by consumers when buying Defendants' products, including by consumers in Delaware.

132. Creating a false sense of disagreement in the scientific community (despite the consensus that its own scientists, experts, and managers had previously acknowledged) has had an evident impact on public opinion. A 2007 Yale University-Gallup poll found that while 71 percent of Americans personally believed global warming was happening, only 48 percent believed that there was a consensus

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[117] *E.g.*, Willie Soon & Sallie Baliunas, *Proxy Climatic and Environmental Changes of the Past 1000 Years*, 23 CLIMATE RESEARCH 88, 105 (Jan. 31, 2003), http://www.int-res.com/articles/cr2003/23/c023p089.pdf.

[118] *E.g.*, *Smithsonian Statement: Dr. Wei-Hock (Willie) Soon*, SMITHSONIAN (Feb. 26, 2015), https://web.archive.org/web/20181105223030/https://www.si.edu/newsdesk/releases/smithsonian-statement-dr-wei-hock-willie-soon.

among the scientific community, and 40 percent believed there was a lot of disagreement among scientists over whether global warming was occurring.[119]

133. 2007 was the same year the IPCC published its Fourth Assessment Report, in which it concluded that "there is *very high confidence* that the net effect of human activities since 1750 has been one of warming."[120] The IPCC defined "very high confidence" as at least a 9 out of 10 chance.[121]

134. Defendants, individually and through their trade association memberships, worked directly, and often in a deliberately obscured manner, to evade regulation of the emissions resulting from use of their fossil fuel products and to conceal and misrepresent their products' known dangers.

135. Defendants have funded dozens of think tanks, front groups, and dark money foundations pushing climate change denial. These include CEI, the Heartland Institute, Frontiers for Freedom, Committee for a Constructive Tomorrow, and Heritage Foundation. From 1998 to 2014 ExxonMobil spent almost

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[119] *American Opinions on Global Warming: A Yale/Gallup/Clearvision Poll*, Yale Program on Climate Change Communication (July 31, 2007), http://climatecommunication.yale.edu/publications/american-opinions-on-global-warming.

[120] IPCC, SUMMARY FOR POLICYMAKERS: A REPORT OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT 3 (2007), https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg1-spm-1.pdf.

[121] *Id.*

$31 million funding numerous organizations misrepresenting the scientific consensus that Defendants' fossil fuel products were causing climate change, sea level rise, and injuries to Delaware, among other communities.[122] Several Defendants have been linked to other groups that undermine the scientific basis linking Defendants' fossil fuel products to climate change and sea level rise, including the Frontiers of Freedom Institute and the George C. Marshall Institute.

136. Exxon acknowledged its own previous success in sowing uncertainty and slowing mitigation through funding of climate denial groups. In its 2007 Corporate Citizenship Report, Exxon declared: "In 2008, we will discontinue contributions to several public policy research groups whose position on climate change could divert attention from the important discussion on how the world will secure the energy required for economic growth in an environmentally responsible manner."[123] Despite this pronouncement, Exxon remained financially associated with several such groups after the report's publication.

137. In September 2015, journalists at *InsideClimate News* reported the fact that Exxon Mobil had superior knowledge of the causes and potential consequences

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[122] ExxonSecrets.org, *ExxonMobil Climate Denial Funding 1998–2014*, http://exxonsecrets.org/html/index.php.

[123] EXXONMOBIL, 2007 CORPORATE CITIZENSHIP REPORT 41 (Dec. 31, 2007), http://www.documentcloud.org/documents/2799777-ExxonMobil-2007-Corporate-Citizenship-Report.html.

of climate change and the role its products played in causing climate change as far back as the 1970s.[124] These journalists uncovered ExxonMobil's superior knowledge through an exhaustive investigation of thousands of archived documents and through interviews with former ExxonMobil employees.

138. Between October and December 2015, several journalists at the Energy and Environment Reporting Project at Columbia University's Graduate School of Journalism and the *Los Angeles Times* also exposed the fact that ExxonMobil and others had superior knowledge of the causes and potential consequences of climate change and the role their products played in causing climate change as far back as the 1970s.[125] These journalists uncovered ExxonMobil's superior knowledge through an exhaustive investigation of archived documents, through interviews with former ExxonMobil employees, and through a review of scientific journals.

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[124] Neela Banerjee et al., *Exxon: The Road Not Taken*, INSIDECLIMATE NEWS (Sept. 16, 2015), https://insideclimatenews.org/content/Exxon-The-Road-Not-Taken.

[125] The *Los Angeles Times* published a series of three articles between October and December 2015. *See* Katie Jennings et al., *How Exxon went from leader to skeptic on climate change research*, L.A. TIMES (Oct. 23, 2015), https://graphics.latimes.com/exxon-research; Sara Jerving et al., *What Exxon knew about the Earth's melting Arctic*, L.A. TIMES (Oct. 9, 2015), https://www.latimes.com/nation/la-na-what-exxon-knew-20151009-story.html; 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.

139. In November 2017, the Center for International Environmental Law issued a report that revealed that Defendants, including API, had superior knowledge of the causes and potential consequences of climate change and the role their products played in causing climate change.[126]

140. Defendants could have contributed to the global effort to mitigate the impacts of greenhouse gas emissions by, for example, delineating practical technical strategies, policy goals, and regulatory structures that would have allowed them to continue their business ventures while reducing greenhouse gas emissions and supporting a transition to a lower carbon future. Instead, Defendants undertook a momentous effort to evade international and national regulation of greenhouse gas emissions to enable them to continue unabated fossil fuel production.

141. As a result of Defendants' tortious, false, and misleading conduct, consumers of Defendants' fossil fuel products and policy-makers, in Delaware as elsewhere, have been deliberately and unnecessarily deceived about: the role of fossil fuel products in causing global warming, sea level rise, disruptions to the hydrologic cycle, and increased extreme precipitation, heatwaves, drought and other

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[126] CAROLL MUFFETT & STEVEN FEIT, CTR. FOR INT'L ENVTL. LAW, SMOKE AND FUMES: THE LEGAL AND EVIDENTIARY BASIS FOR HOLDING BIG OIL ACCOUNTABLE FOR THE CLIMATE CRISIS 10 (2017), https://www.ciel.org/reports/smoke-and-fumes.

consequences of the climate crisis; the acceleration of global warming since the mid-20th century and the continuation thereof; and the fact that the continued increase in fossil fuel product consumption creates severe environmental threats and significant economic costs for coastal communities, including Delaware. Reasonable consumers and policy makers have also been deceived about the depth and breadth of the state of the scientific evidence on anthropogenic climate change, and in particular, about the strength of the scientific consensus demonstrating the role of fossil fuels in causing both climate change and a wide range of potentially destructive impacts, including sea level rise, disruptions to the hydrologic cycle, extreme precipitation, heatwaves, drought, and associated consequences.

D. In Contrast to Their Public Statements, Defendants' Internal Actions Demonstrate Their Awareness of and Intent to Profit from the Unabated Use of Fossil Fuel Products.

142. In contrast to their public-facing efforts challenging the validity of the scientific consensus about anthropogenic climate change, Defendants' acts and omissions evidence their internal acknowledgement of the reality of climate change and its likely consequences. Those actions include, but are not limited to, making multi-billion-dollar infrastructure investments for their own operations that acknowledge the reality of coming anthropogenic climate-related change. Those investments included (among others), raising offshore oil platforms to protect against sea level rise; reinforcing offshore oil platforms to withstand increased wave

strength and storm severity; and developing and patenting designs for equipment intended to extract crude oil and/or natural gas in areas previously unreachable because of the presence of polar ice sheets.[127]

143. For example, in 1973 Exxon obtained a patent for a cargo ship capable of breaking through sea ice[128] and for an oil tanker[129] designed specifically for use in previously unreachable areas of the Arctic.

144. In 1974, Chevron obtained a patent for a mobile arctic drilling platform designed to withstand significant interference from lateral ice masses,[130] allowing for drilling in areas with increased ice floe movement due to elevated temperature.

145. That same year, Texaco (Chevron) worked toward obtaining a patent for a method and apparatus for reducing ice forces on a marine structure prone to being frozen in ice through natural weather conditions,[131] allowing for drilling in previously unreachable Arctic areas that would become seasonally accessible.

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[127] Lieberman & Rust, *supra* note 125.

[128] ExxonMobil Research Engineering Co., *Patent US3727571A: Icebreaking cargo vessel* (granted Apr. 17, 1973), https://www.google.com/patents/US3727571.

[129] ExxonMobil Research Engineering Co., *Patent US3745960A: Tanker vessel* (granted July 17, 1973), https://www.google.com/patents/US3745960.

[130] Chevron Research & Technology Co., *Patent US3831385A: Arctic offshore platform* (granted Aug. 27, 1974), https://www.google.com/patents/US3831385.

[131] Texaco Inc., *Patent US3793840A: Mobile, arctic drilling and production platform* (granted Feb. 26, 1974), https://www.google.com/patents/US3793840.

146. Shell obtained a patent similar to Texaco's (Chevron) in 1984.[132]

147. In 1989, Norske Shell, Royal Dutch Shell's Norwegian subsidiary, altered designs for a natural gas platform planned for construction in the North Sea to account for anticipated sea level rise. Those design changes were ultimately carried out by Shell's contractors, adding substantial costs to the project.[133]

a. The Troll field, off the Norwegian coast in the North Sea, was proven to contain large natural oil and gas deposits in 1979, shortly after Norske Shell was approved by Norwegian oil and gas regulators to operate a portion of the field.

b. In 1986, the Norwegian parliament granted Norske Shell authority to complete the first development phase of the Troll field gas deposits, and Norske Shell began designing the "Troll A" gas platform, with the intent to begin operation of the platform in approximately 1995. Based on the very large size of the gas deposits in the Troll field, the Troll A platform was projected to operate for approximately 70 years.

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[132] Shell Oil Co., *Patent US4427320A: Arctic offshore platform* (granted Jan. 24, 1984), https://www.google.com/patents/US4427320.

[133] *Greenhouse Effect: Shell Anticipates a Sea Change*, N.Y. TIMES (Dec. 20, 1989), http://www.nytimes.com/1989/12/20/business/greenhouse-effect-shell-anticipates-a-sea-change.html.

c. The platform was originally designed to stand approximately 100 feet above sea level—the amount necessary to stay above waves in a once-in-a-century strength storm.

d. In 1989, Shell engineers revised their plans to increase the above-water height of the platform by 3–6 feet, specifically to account for higher anticipated average sea levels and increased storm intensity due to global warming over the platform's 70-year operational life.[134]

e. Shell projected that the additional 3–6 feet of above-water construction would increase the cost of the Troll A platform by as much as $40 million.

E. Defendants' Actions Have Exacerbated the Costs of Adapting to and Mitigating the Adverse Impacts of the Climate Crisis.

148. As greenhouse gas pollution accumulates in the atmosphere, some of which does not dissipate for potentially thousands of years (namely CO_2), climate changes and consequent adverse environmental changes compound, and their frequencies and magnitudes increase. As those adverse environmental changes compound and their frequencies and magnitudes increase, so too do the physical, environmental, economic, and social injuries resulting therefrom.

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[134] *Id.*; Lieberman & Rust, *supra* note 125.

149. Delayed efforts to curb anthropogenic greenhouse gas emissions have therefore increased environmental harms and increased the magnitude and cost to address harms, including to Delaware, that have already occurred or are locked in by previous emissions.

150. Therefore, Defendants' campaign to obscure the science of climate change so as to protect and expand the use of fossil fuels greatly increased and continues to increase the harms and rate of harms suffered by Delaware and its residents.

151. The costs of inaction on anthropogenic climate change and its adverse environmental effects were not lost on Defendants. In a 1997 speech by John Browne, Group Executive for BP America, at Stanford University, Browne described Defendants' and the entire fossil fuel industry's responsibility and opportunities to reduce use of fossil fuel products, reduce global CO_2 emissions, and mitigate the harms associated with the use and consumption of such products:

> A new age demands a fresh perspective of the nature of society and responsibility.
>
> We need to go beyond analysis and to take action. It is a moment for change and for a rethinking of corporate responsibility. . . .
>
> [T]here is now an effective consensus among the world's leading scientists and serious and well informed people outside the scientific community that there is a discernible human influence on the climate, and a link between the concentration of carbon dioxide and the increase in temperature.

The prediction of the IPCC is that over the next century temperatures might rise by a further 1 to 3.5 degrees centigrade [1.8º—6.3º F], and that sea levels might rise by between 15 and 95 centimetres [5.9 and 37.4 inches]. Some of that impact is probably unavoidable, because it results from current emissions. . . .

[I]t would be unwise and potentially dangerous to ignore the mounting concern.

The time to consider the policy dimensions of climate change is not when the link between greenhouse gases and climate change is conclusively proven … but when the possibility cannot be discounted and is taken seriously by the society of which we are part. . . .

We [the fossil fuel industry] have a responsibility to act, and I hope that through our actions we can contribute to the much wider process which is desirable and necessary.

BP accepts that responsibility and we're therefore taking some specific steps.

To control our own emissions.

To fund continuing scientific research.

To take initiatives for joint implementation.

To develop alternative fuels for the long term.

And to contribute to the public policy debate in search of the wider global answers to the problem.[135]

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[135] John Browne, *BP Climate Change Speech to Stanford*, CLIMATEFILES (May 19, 1997), http://www.climatefiles.com/bp/bp-climate-change-speech-to-stanford.

152. Despite Defendants' knowledge of the foreseeable, measurable, and significant harms associated with the unabated consumption and use of their fossil fuel products, in Delaware as elsewhere, and despite Defendants' knowledge of technologies and practices that could have helped to reduce the foreseeable dangers associated with their fossil fuel products, Defendants continued to misleadingly and wrongfully market and promote heavy fossil fuel use and mounted a campaign to obscure the connection between their fossil fuel products and the climate crisis, dramatically increasing the cost of abatement. This campaign was intended to and did reach and influence Delaware consumers, along with consumers elsewhere. At all relevant times, Defendants were deeply familiar with opportunities to reduce the use of their fossil fuel products, reduce global greenhouse gas emissions associated therewith, and mitigate the harms associated with the use and consumption of such products. Examples of that recognition include, but are not limited to the following:

a. In 1961, Phillips Petroleum Company filed a patent application for a method to purify gas, among other things, as "natural gas containing gasoline hydrocarbons can contain undesirable amounts of sulfur and other compounds such as carbon dioxide which are undesirable in the finished gasoline product."[136]

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[136] Phillips Petroleum Co., *Patent US3228874A: Method for recovering a purified component from a gas* (filed Aug. 22, 1961), https://patents.google.com/patent/US3228874.

b. In 1963, Esso (Exxon Mobil) obtained multiple patents on technologies for fuel cells, including on the design of a fuel cell and necessary electrodes,[137] and on a process for increasing the oxidation of a fuel, specifically methanol, to produce electricity in a fuel cell.[138]

c. In 1970, Esso (Exxon Mobil) obtained a patent for a "low-polluting engine and drive system" that used an interburner and air compressor to reduce pollutant emissions, including CO_2 emissions, from gasoline combustion engines (the system also increased the efficiency of the fossil fuel products used in such engines, thereby lowering the amount of fossil fuel product necessary to operate engines equipped with this technology).[139]

d. In 1980, Imperial Oil wrote in its "Review of Environmental Protection Activities for 1978–79: "There is no doubt that increases in fossil fuel usage and decreases in forest cover are aggravating the potential problem of increased CO_2 in the atmosphere. Technology exists to remove CO_2 from stack

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[137] ExxonMobil Research Engineering Co., *Patent US3116169A: Fuel cell and fuel cell electrodes* (granted Dec. 31, 1963), https://www.google.com/patents/US3116169.

[138] ExxonMobil Research Engineering Co., *Patent US3113049A: Direct production of electrical energy from liquid fuels* (granted Dec. 3, 1963), https://www.google.com/patents/US3113049.

[139] ExxonMobil Research Engineering Co., *Patent US3513929A: Low-polluting engine and drive system* (granted May 26, 1970), https://www.google.com/patents/US3513929.

gases but removal of only 50% of the CO_2 would double the cost of power generation."[140]

e. A 1987 company briefing produced by Shell on "Synthetic Fuels and Renewable Energy" noted that while "immediate prospects" were "limited," "nevertheless it is by pursuing commercial opportunities now and in the near future that the valuable experience needed for further development will be gained." The brief also noted that "the task of replacing oil resources is likely to become increasingly difficult and expensive and there will be a growing need to develop lean, convenient alternatives. Initially these will supplement and eventually replace valuable oil products. Many potential energy options are as yet unknown or at very early stages of research and development. New energy sources take decades to make a major global contribution. Sustained commitment is therefore needed during the remainder of this century to ensure that new technologies and those currently at a relatively early stage of development are available to meet energy needs in the next century."[141]

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[140] IMPERIAL OIL LTD., REVIEW OF ENVIRONMENTAL PROTECTION ACTIVITIES FOR 1978–1979 2 (Aug. 6, 1980), http://www.documentcloud.org/documents/2827784-1980-Imperial-Oil-Review-of-Environmental.html#document/p2.

[141] *Synthetic Fuels and Renewable Energy*, SHELL SERVICE BRIEFING, no. 2, 1987, https://assets.documentcloud.org/documents/4411089/Document2.pdf.

f. A 1989 article in a publication from Exxon Corporate Research for company use only stated: "CO2 emissions contribute about half the forcing [sic] leading to a potential enhancement of the Greenhouse Effect. Since energy generation from fossil fuels dominates modern CO2 emissions, strategies to limit CO2 growth focus near term on energy efficiency and long term on developing alternative energy sources. Practiced at a level to significantly reduce the growth of greenhouse gases, these actions would have substantial impact on society and our industry—near-term from reduced demand for current products, long term from transition to entirely new energy systems."[142]

g. In 1996, more than thirty years after API's president warned that "time is running out" for the world to address the "catastrophic consequences of pollution," API published the book "Reinventing Energy: Making the Right Choices" to refute this very conclusion. Contradicting the scientific consensus known by its members for decades, the book claims: "Currently, no conclusive—or even strongly suggestive—scientific evidence exists that human activities are

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[142] Brian Flannery, *Greenhouse Science*, CONNECTIONS: CORPORATE RESEARCH, EXXON RESEARCH AND ENGINEERING COMPANY, Fall 1989, http://www.climatefiles.com/exxonmobil/1989-exxon-mobil-article-technologys-place-marketing-mix.

significantly affecting sea levels, rainfall, surface temperatures, or the intensity and frequency of storms."[143]

h. The book downplayed nearly every aspect of established climate science. API baldly claimed that scientists do not understand how carbon flows in and out of the atmosphere and whether fossil fuels are even responsible for increasing concentrations of atmospheric CO_2. It then explained that even if some warming does occur, such warming "would present few if any problems" because, for example, farmers could be "smart enough to change their crop plans" and low-lying areas would "likely adapt" to sea level rise.[144]

i. As Delaware's vulnerability demonstrates, however, such adaptations, made necessary by Defendants' conduct, are enormously expensive. Defendants' strategy merely transferred the significant costs and externalities of their actions onto the State, and in the process, they reaped billions of dollars in profit.

j. In the publication, API also contended that "the state of the environment does not justify the call for the radical lifestyle changes Americans

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[143] AMERICAN PETROLEUM INSTITUTE, REINVENTING ENERGY: MAKING THE RIGHT CHOICES 79 (1996), http://www.climatefiles.com/trade-group/american-petroleum-institute/1996-reinventing-energy.

[144] *Id*. at 86–87.

would have to make to substantially reduce the use of oil and other fossil fuels" and that the "benefits of alternatives aren't worth the cost of forcing their use." "Some jobs definitely will be created in making, distributing and selling alternatives. But they will come at the expense of lost jobs in the traditional automobile and petroleum industries," the authors continued. "Alternatives will likely be more expensive than conventional fuel/vehicle technology. Consumers, obviously, will bear these increased expenses, which means they will have less to spend on other products and cost jobs."[145]

k. API published this book in service of one goal—ensuring its members could continue to produce and sell fossil fuels in massive quantities that it knew would devastate the planet. The book's final section reveals this purpose. API concluded: "[S]evere reduction in greenhouse gas emissions by the United States or even all developed countries would impose large costs on countries but yield little in the way of benefits—even under drastic climate change scenarios."[146]

153. Fossil Fuel Defendants could have made major inroads to mitigate the State's injuries through technology by developing and employing technologies to capture and sequester greenhouse gases emissions associated with conventional use

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[145] *Id*. at 59, 68, 69.

[146] *Id*. at 89.

of their fossil fuel products. Fossil Fuel Defendants had knowledge dating at least back to the 1960s, and indeed, internally researched and perfected many such technologies. For instance:

a. Phillips Petroleum Company (ConocoPhillips) obtained a patent in 1966 for a "Method for recovering a purified component from a gas" outlining a process to remove carbon from natural gas and gasoline streams;[147] and

b. In 1973, Shell was granted a patent for a process to remove acidic gases, including CO_2, from gaseous mixtures.[148]

154. Despite this knowledge, Fossil Fuel Defendants' later forays into the alternative energy sector were largely pretenses. For instance, in 2001, Chevron developed and shared a sophisticated information management system to gather greenhouse gas emissions data from its explorations and production to help regulate and set reduction goals.[149] Beyond this technological breakthrough, Chevron touted

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[147] Phillips Petroleum Co., *Patent US3228874A: Method for recovering a purified component from a gas* (granted Jan. 11, 1966), https://patents.google.com/patent/US3228874.

[148] Shell Oil Co., *Patent US3760564A: Process for the removal of acidic gases from a gas mixture*, (granted Sept. 25, 1973), https://www.google.com/patents/US3760564A.

[149] Press Release, Chevron, *Chevron Introduces New System to Manage Energy Use* (Sept. 25, 2001), https://web.archive.org/web/20170207205638/https://www.chevron.com/stories/chevron-introduces-new-system-to-manage-energy-use.

"profitable renewable energy" as part of its business plan for several years and launched a 2010 advertising campaign promoting the company's move towards renewable energy. Despite all this, Chevron rolled back its renewable and alternative energy projects in 2014.[150]

155. Similarly, ConocoPhillips's 2012 Sustainable Development report declared developing renewable energy a priority in keeping with their position on sustainable development and climate change.[151] Their 10-K filing from the same year told a different story: "As an independent E&P company, we are solely focused on our core business of exploring for, developing and producing crude oil and natural gas globally."[152]

156. Likewise, while Shell orchestrated an entire public relations campaign around energy transitions towards net zero emissions, a fine-print disclaimer in its

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[150] Ben Elgin, *Chevron Dims the Lights on Green Power*, BLOOMBERG (May 29, 2014), https://www.bloomberg.com/news/articles/2014-05-29/chevron-dims-the-lights-on-renewable-energy-projects.

[151] CONOCOPHILLIPS, SUSTAINABLE DEVELOPMENT (2012), http://static.conocophillips.com/files/resources/2012-sd-report.pdf.

[152] CONOCOPHILLIPS, FORM 10-K: ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934 23 (Dec. 31, 2012), https://www.sec.gov/Archives/edgar/data/1163165/000119312513065426/d452384d10k.htm.

2017 sustainability report reads: "we have no immediate plans to move to a net-zero emissions portfolio over our investment horizon of 10–20 years."[153]

157. BP, appearing to abide by the representations Lord Browne made in his speech described above, engaged in a rebranding campaign to convey an air of environmental stewardship and renewable energy to its consumers. This included renouncing its membership in the GCC in 2007, changing its name from "British Petroleum" to "BP" while adopting the slogan "Beyond Petroleum," and adopting a conspicuously green corporate logo. However, BP's self-touted "alternative energy" investments during this turnaround included investments in natural gas, which is a fossil fuel, and in 2007 the company reinvested in Canadian tar sands, a particularly high-carbon source of oil.[154] The company ultimately abandoned its wind and solar assets in 2011 and 2013, respectively, and even the "Beyond Petroleum" moniker in 2013.[155]

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[153] Shell, *Sustainability Report 2017: Definitions and Cautionary Note*, https://reports.shell.com/sustainability-report/2017/servicepages/about.html.

[154] Fred Pearce, *Greenwash: BP and the Myth of a World 'Beyond Petroleum*,' THE GUARDIAN, (Nov. 20, 2008), https://www.theguardian.com/environment/2008/nov/20/fossilfuels-energy.

[155] Javier E. David, *'Beyond Petroleum' No More? BP Goes Back to Basics*, CNBC (Apr. 20, 2013), http://www.cnbc.com/id/100647034.

158. After posting a $10 billion quarterly profit, Exxon in 2005 stated that "We're an oil and gas company. In times past, when we tried to get into other businesses, we didn't do it well. We'd rather re-invest in what we know."[156]

159. Even if Fossil Fuel Defendants did not adopt technological or energy source alternatives that would have reduced use of fossil fuel products, reduced global greenhouse gas pollution, and/or mitigated the harms associated with the use and consumption of such products, Fossil Fuel Defendants could have taken other practical, cost-effective steps to reduce the use of their fossil fuel products, reduce global greenhouse gas pollution associated therewith, and mitigate the harms associated with the use and consumption of such products. Those alternatives could have included, among other measures:

a. Acknowledging and sharing the validity of scientific evidence on anthropogenic climate change and the damages it will cause people; communities, including the State; and the environment. Acceptance of that evidence along with associated warnings and actions would have altered the debate from *whether* to combat climate change and sea level rise to *how* to combat it; and avoided much of the public confusion that has ensued over more than 30 years, since at least 1988;

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[156] James R. Healy, *Alternate Energy Not in Cards at ExxonMobil*, USA TODAY (Oct. 27, 2005), https://usatoday30.usatoday.com/money/industries/energy/2005-10-27-oil-invest-usat_x.htm.

b. Forthrightly communicating with Defendants' stockholders, banks, insurers, consumers, the public, regulators, and the State and warning them about the global warming hazards of Defendants' fossil fuel products that were known to Defendants, which would have enabled those groups to make material, informed decisions about whether and how to address climate change and sea level rise vis-à-vis Defendants' products;

c. Refraining from affirmative efforts, whether directly, through coalitions, or through front groups, to distort public debate, and to cause many consumers and business and political leaders to think the relevant science was far less certain that it actually was;

d. Sharing their internal scientific research with consumers and the public, and with other scientists and business leaders, so as to increase public understanding of the scientific underpinnings of climate change and its relation to Defendants' fossil fuel products;

e. Supporting and encouraging policies to avoid dangerous climate change, and demonstrating corporate leadership in addressing the challenges of transitioning to a low-carbon economy;

f. Prioritizing alternative sources of energy through sustained investment and research on renewable energy sources to replace dependence on Defendants' hazardous fossil fuel products; and

g. Adopting their stockholders' concerns about Fossil Fuel Defendants' need to protect their businesses from the inevitable consequences of profiting from their fossil fuel products. Over the period of 1990–2015, Fossil Fuel Defendants' stockholders proposed hundreds of resolutions to change Fossil Fuel Defendants' policies and business practices regarding climate change. Those included increasing renewable energy investment, cutting emissions, and performing carbon risk assessments, among others.

160. Despite their knowledge of the foreseeable harms associated with the consumption of Defendants' fossil fuel products, and despite the existence and fossil fuel industry knowledge of opportunities that would have reduced the foreseeable dangers associated with those products, Defendants wrongfully and falsely promoted, campaigned against regulation of, and concealed the hazards of use of their fossil fuel products.

F. Defendants Continue to Mislead About the Impact of Their Fossil Fuel Products on Climate Change Through Greenwashing Campaigns and Other Misleading Advertisements in Delaware and Elsewhere.

161. Defendants' coordinated campaign of disinformation and deception continues today, even as the scientific consensus about the cause and consequences of climate change has strengthened. Fossil Fuel Defendants have falsely claimed through advertising campaigns in Delaware and/or campaigns intended to reach

Delaware, that their businesses are substantially invested in lower carbon technologies and renewable energy sources. In truth, each Fossil Fuel Defendant has invested minimally in renewable energy while continuing to expand its fossil fuel production. They have also claimed that certain of their fossil fuel products are "green" or "clean," and that using these products will sufficiently reduce or reverse the dangers of climate change. None of Fossil Fuel Defendants' fossil fuel products are "green" or "clean" because they all continue to ultimately warm the planet.

162. Instead of widely disseminating this information, reducing their pollution, and transitioning to non-polluting products, Defendants placed profits over people. In connection with selling gasoline and other fossil fuel products to consumers in Delaware, Defendants have failed to inform or warn those consumers about the foreseeable effects of their fossil fuel products in causing and accelerating the climate crisis.

163. Defendants' advertising and promotional materials fail to disclose the extreme safety risk associated with the use of Defendants' dangerous fossil fuel products, which are causing "catastrophic" climate change, as understood by Defendants' and the industry's own scientists decades ago and with the effects of global warming now being felt in Delaware. They continue to omit that important information to this day.

164. Defendants have not just failed to disclose the catastrophic danger their products cause. After having engaged in a long campaign to deceive consumers and the public about the science behind climate change, Defendants are now engaging in "greenwashing" by employing false and misleading advertising campaigns promoting themselves as sustainable energy companies committed to finding solutions to climate change, including by investing in alternative energy. These campaigns were intended to and did reach and influence the public and consumers, including in Delaware.

165. These misleading "greenwashing" campaigns are intended to capitalize on consumers' concerns for climate change and lead Delaware consumers to believe that Defendants are actually substantially diversified energy companies making meaningful investments in low carbon energy compatible with avoiding catastrophic climate change.

166. Contrary to this messaging, however, Fossil Fuel Defendants' spending on low carbon energy is substantially and materially less than Fossil Fuel Defendants indicate to consumers. According to a recent analysis, between 2010 and 2018, BP spent 2.3% of total capital spending on low carbon energy sources, Shell spent 1.2%,

and Chevron and Exxon just 0.2% each.[157] Meanwhile, Fossil Fuel Defendants continue to expand fossil fuel production and typically do not even include non-fossil energy systems in their key performance indicators or reported annual production statistics.[158]

167. Ultimately, although Defendants currently claim to support reducing greenhouse gas emissions, their conduct belies these statements. Defendants have continued to ramp up fossil fuel production globally, to invest in new fossil fuel development—including in tar sands crude and shale gas fracking, some of the most carbon-intensive extraction projects—and to plan for unabated oil and gas exploitation indefinitely into the future.

168. For example, Exxon is projected to increase oil production by more than 35% between 2018 and 2030—a sharper rise than over the previous 12 years.[159] Shell is forecast to increase output by 38% by 2030, by increasing its crude oil

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[157] Anjli Raval & Leslie Hook, *Oil and Gas Advertising Spree Signals Industry's Dilemma*, FINANCIAL TIMES (Mar. 6, 2019), https://www.ft.com/content/5ab7edb2-3366-11e9-bd3a-8b2a211d90d5.

[158] *See, e.g.*, BP ANNUAL REPORT AND FORM 20-F 24 (2017), https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/investors/bp-annual-report-and-form-20f-2017.pdf.

[159] Jonathan Watts et al., *Oil Firms to Pour Extra 7m Barrels Per Day Into Markets, Data Shows*, THE GUARDIAN (Oct. 10, 2019), https://www.theguardian.com/environment/2019/oct/10/oil-firms-barrels-markets.

production by more than half and its gas production by over a quarter.[160] BP is projected to increase production of oil and gas by 20% by 2030.[161] Chevron set an oil production record in 2018 of 2.93 million barrels per day, and the company predicts further significant growth in oil production this year.[162] Like the other Fossil Fuel Defendants, it sees the next 20 years—the crucial window in which the world must reduce greenhouse gas emissions to avert the most catastrophic effects of the climate crisis—as a time of increased investment and production in its fossil fuel operations. For example, a 2019 investor report touts Chevron's "significant reserve additions in 2018" in the multiple regions in North America and around the world, as well as significant capital projects involving construction of refineries worldwide.[163] Similarly, Marathon Petroleum has stated, "We have invested billions of dollars to make our operations more energy efficient[and] reduce our

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[160] *Id*.

[161] *Id*.

[162] Kevin Crowley & Eric Roston, *Chevron Aligns Strategy with Paris Deal But Won't Cap Output*, BLOOMBERG (Feb. 7, 2019), https://www.bloomberg.com/news/articles/2019-02-07/chevron-pledges-alignment-with-paris-accord-but-won-t-cap-output.

[163] CHEVRON, CHEVRON 2019 INVESTOR PRESENTATION (Feb. 2019), https://chevroncorp.gcs-web.com/static-files/c3815b42-4deb-4604-8c51-bde9026f6e45.

emissions[.]"[164] Yet only 1% of the company's capital spend from 2010–2018 was on low carbon energy sources, all of which was in carbon capture and storage.[165]

169. Defendants' greenwashing campaigns deceptively minimize their role in causing climate change, including by suggesting that small changes in consumer choice and behavior can adequately address climate change. These campaigns misleadingly portray Defendants as part of the solution to climate change and distract from the fact that Defendants' fossil fuel products are the primary driver of global warming.

170. For instance: natural gas, as a fossil fuel, emits greenhouse gases at all phases of its lifecycle, including significant methane releases from extraction and transportation, CO_2 releases when gas is flared at the well, and CO_2 releases at the point of combustion. Methane is a greenhouse gas with a global warming potential many times higher than carbon dioxide. Methane traps more heat in the atmosphere and accelerates climate disruption at a faster rate than carbon dioxide. Methane has a powerful impact on global temperature and the climate system, particularly over short time horizons. For example, methane has a warming impact that is 86 times

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[164] MARATHON PETROLEUM CORP., PERSPECTIVES ON CLIMATE-RELATED SCENARIOS (Oct. 2018), https://www.marathonpetroleum.com/content/documents/Responsibility/MPC-ClimateReport-2018.pdf.

[165] Raval & Hook, *supra* note 157.

that of carbon dioxide over a twenty-year time horizon. During that time, major changes will need to be made to address climate impacts that have already been caused by Defendants' campaign of deception. Yet, in Defendants' greenwashing advertisements, they misleadingly portray natural gas as "sustainable" in an effort to paint themselves as working to solve climate change by making energy "cleaner."[166] In reality, however, as the main drivers of greenhouse gas emissions and climate impacts, they are doing the exact opposite.

171. Below are representative excerpts from Defendants' greenwashing campaigns, which present a false image of Defendants as clean energy innovators taking meaningful action to address climate change. Defendants' actions to further entrench fossil fuel production and consumption squarely contradict their public affirmations of corporate responsibility and support for reducing global greenhouse gas emissions. Functionally, Defendants have cut fossil fuels from their brand but not their business. Their greenwashing advertisements to the contrary are deceptive to Delaware consumers.

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[166] *See, e.g.*, *The Mobility Quandary* (Content from Shell), WASH. POST, https://www.washingtonpost.com/brand-studio/shell/the-mobility-quandary ("Another critical component of a sustainable energy mix in transportation is further investment in natural gas, a cleaner-burning fossil fuel . . . .").

i. Exxon's Misleading and Deceptive Greenwashing Campaigns

172. Exxon is currently running a series of full-page advertisements in print editions and posts in the electronic edition of the *New York Times*, as well as on Exxon's YouTube channel, in which Exxon misleadingly promotes its efforts to develop energy from alternative sources such as algae and plant waste—efforts that are vanishingly small in relation to the investments Exxon continues to make in fossil fuel production.

173. For example, an online advertisement in the New York Times, accessible to and marketed toward Delaware consumers, promotes the company's development of algae biofuels, but omits that it is extremely resource intensive to produce algae for biofuel on a large scale due to the massive amounts of land and fertilizer needed. The advertisement also misleadingly tells consumers that Exxon is "working to decrease [its] overall carbon footprint," and that the company's "sustainable and environmentally friendly" biodiesel fuel could reduce "carbon emissions from transportation" by greater than 50%.[167]

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[167] *The Future of Energy? It May Come From Where You Least Expect* (ExxonMobil Paid Post), N.Y. TIMES, https://www.nytimes.com/paidpost/exxonmobil/the-future-of-energy-it-may-come-from-where-you-least-expect.html.

174. Exxon's advertisements promoting its investments in "sustainable and environmentally friendly" energy sources further fail to mention that the company's investment in alternative energy is miniscule compared to its ongoing "business as usual" ramp-up in global fossil fuel exploration, development, and production activities. From 2010 to 2018, Exxon spent only 0.2% of its capital expenditures on low-carbon energy systems, with nearly the totality of its spending (99.8%) focused on maintaining and expanding fossil fuel production. The company has simultaneously invested billions of dollars into development of Canadian tar sands projects, some of the most carbon intensive oil extraction projects in the world.[168]

175. Exxon's investment is not nearly enough to produce alternative energy on the scale falsely implied and touted by Exxon in its advertisements. A 2019 report by InfluenceMap documents that Exxon's advertised goal of producing 10,000 barrels of biofuel per day by 2025 would equate to only 0.2% of its current refinery capacity—an amount the report referred to as "a rounding error."[169] This is in sharp

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[168] Raval & Hook, *supra* note 157. Exxon has invested more than $20 billion in capital expenditures at its open-pit tar sands mining operation at Kearl Lake in Alberta, Canada.

[169] INFLUENCEMAP, BIG OIL'S REAL AGENDA ON CLIMATE CHANGE (Mar. 2019), https://influencemap.org/report/How-Big-Oil-Continues-to-Oppose-the-Paris-Agreement-38212275958aa21196dae3b76220bddc.

contrast to Exxon's projected increases in oil production by more than 35%, meaning any alternative fuel efforts are offset by massive oil emissions.[170]

176. Exxon's claim that its biodiesel fuel could reduce carbon emissions from transportation by greater than 50% is also highly misleading. For example, biodiesel fuel is typically a blend of only 5 to 20% biofuel, with the remainder coming from fossil fuel.[171] Because biodiesel is produced predominantly from fossil fuel, it is not "sustainable" nor "environmentally friendly" as claimed in Exxon's advertisement.

177. Supplementing these misleading campaigns, Exxon has promoted dozens of multimedia advertisements on platforms such as Instagram, Twitter, Facebook, and LinkedIn, where Exxon has millions of social media followers and its content has received hundreds of thousands of "likes" and "views." These advertisements overwhelmingly emphasize its claimed leadership in research on lowering emissions, algae biofuel, climate change solutions, and clean energy research. These advertisements were intended to and did reach the public and consumers in Delaware.

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[170] Watts et al., *supra* note 159.

[171] *See* U.S. Department of Energy, Alternative Fuels Data Center, *Biodiesel Blends*, https://afdc.energy.gov/fuels/biodiesel_blends.html.

ii. Shell's Misleading and Deceptive Greenwashing Campaigns

178. Like Exxon, Shell has misleadingly promoted itself to Delaware consumers as environmentally conscientious through advertisements in publications such as the *New York Times*. The advertisements are targeted to and read by Delaware consumers and intended to influence consumer demand for Shell's products.

179. As part of Shell's "Make the Future" campaign, the company has published numerous advertisements currently viewable on the *New York Times*[172] website, in which the company touts its investment in "alternative energy sources," including liquified natural gas ("LNG"), natural gas, and biofuel, which Shell repeatedly refers to as "cleaner sources."

180. One Shell advertisement in the *Washington Post*, "The Making of Sustainable Mobility," refers to LNG as "a critical component of a sustainable energy mix" and a "lower-carbon fuel" that could "help decrease" CO_2 emissions.[173] The ad emphasizes Shell's leadership in "setting the course" for a "lower-carbon

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[172] *See, e.g.*, *Moving Forward: A Path To Net-Zero Emissions By 2070* (Shell Paid Post), N.Y. TIMES, https://www.nytimes.com/paidpost/shell/ul/moving-forward-a-path-to-net-zero-emissions-by-2070.html.

[173] *See, e.g.*, *The Making of Sustainable Mobility* (Content from Shell), WASH. POST, https://www.washingtonpost.com/brand-studio/shell/the-making-of-sustainable-mobility.

mobility future." Similarly, another Shell advertisement in the *Washington Post*, "The Mobility Quandary," emphasizes Shell's role in working to counteract climate change through investments in alternative energy: "Shell is a bigger player than you might expect in this budding movement to realize a cleaner and more efficient transportation future."[174]

181. Shell's statements emphasizing its involvement in these many areas of energy-related research, development, and deployment are misleading; the company's investments and activities are substantially smaller than its advertisements lead consumers to believe. In reality, only 1.2% of Shell's capital spending from 2010 to 2018 was in low-carbon energy sources, and that number continues to be heavily outweighed by Shell's continued expansion of its fossil fuel business.[175] Additionally, Shell's promotion of natural gas as a "critical component" of sustainable energy for transportation because it is "cleaner-burning" omits critical information about additional emissions from the extraction and transportation of natural gas, which include significant amounts of the potent greenhouse gas methane. LNG also produces significant greenhouse gas emissions at all stages of its lifecycle: in addition to the underlying natural gas production, processing, and

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[174] *The Mobility Quandary* (Content from Shell), WASH. POST., https://www.washingtonpost.com/brand-studio/shell/the-mobility-quandary.

[175] Raval & Hook, *supra* note 157.

transportation, liquefaction of natural gas to produce LNG requires cooling it to approximately -260°F, regasification, and combustion at the ultimate end use.

iii. BP's Misleading and Deceptive Greenwashing Campaigns

182. BP also has misleadingly portrayed itself as diversifying its energy portfolio and reducing its reliance on fossil fuel sales, when its alternative energy portfolio is negligible compared to the company's ever-expanding fossil fuel portfolio. To this end, BP has employed a series of misleading greenwashing advertisements, which are intended to influence consumer demand for its products, including consumers in Delaware.

183. BP ran its extensive "Beyond Petroleum" advertising and rebranding campaign from 2000 to 2008 and even changed its logo to a sunburst, evoking the renewable resource of the sun. BP uses the sunburst logo to advertise at its Delaware gas stations, where consumers purchase BP's gas. The "Beyond Petroleum" advertising campaign falsely portrayed the company as heavily engaged in low-carbon energy sources and no longer investing in but rather moving "beyond" petroleum and other fossil fuels. In truth, BP invested a small percentage of its total capital expenditure during this period on alternative energy research. The vast

majority of its capital expenditure was focused on fossil fuel exploration, production, refining, and marketing.[176]

184. In 2019, BP launched an advertising campaign called "Possibilities Everywhere." These advertisements were misleading both in their portrayal of BP as heavily involved in non-fossil energy systems, including wind, solar, and electric vehicles, as well as in their portrayal of natural gas as environmentally friendly.

185. One Possibilities Everywhere advertisement, called "Better fuels to power your busy life," stated:

> We [] want—and need—[ ] energy to be kinder to the planet. At BP, we're working to make our energy cleaner and better. […] At BP, we're leaving no stone unturned to provide [the] extra energy the world needs while finding new ways to produce and deliver it with 53 fewer emissions. […] We're bringing solar and wind energy to homes from the US to India. We're boosting supplies of cleaner burning natural gas. […] More energy with fewer emissions? We see possibilities everywhere to help the world keep advancing.[177]

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[176] *See* BP, ANNUAL REPORTS AND ACCOUNTS 2008, https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/investors/bp-annual-report-accounts-2008.pdf.

[177] *See* BP, *Better fuels to power your busy life*, https://web.archive.org/web/20191130155554/https://www.bp.com/en/global/corporate/who-we-are/possibilities-everywhere/energy-for-busy-lives.html.

The accompanying video showed a busy household while a voiceover said, "We all want more energy, but with less carbon footprint. That's why at BP we're working to make energy that's cleaner and better."[178]

186. But BP's claim that non-fossil energy systems constitute a substantial portion of BP's business was materially false and misleading. For example, BP owns only approximately 1 gigawatt ("GW") of wind capacity, which is dwarfed by other companies including GE, Siemens, and Vestas (with about 39 GW, 26 GW, and 23 GW capacities, respectively).[179] Overall, installed wind capacity in the United States is approximately 100 GW, meaning BP's installed capacity is a mere 1% of the market.[180] Yet, "Blade runners," another advertisement in BP's "Possibilities Everywhere" campaign, described the company as "one of the major

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[178] *Id*.

[179] For BP's wind capacity, *see* Press Release, *BP restructures U.S. Wind Energy Business for growth* (Dec. 21, 2018), https://www.bp.com/en/global/corporate/news-and-insights/press-releases/bp-restructures-us-wind-energy-business-for-growth.html. For wind capacity of GE, Siemens, and Vestas, *see* Greg Zimmerman, *Who's Powering the Wind Industry in 2019? Top 10 Wind Power Companies*, ENERGY ACUITY (Jan. 7, 2019), https://energyacuity.com/blog/top-wind-power-companies.

[180] *See* Elizabeth Ingram, *U.S. wind capacity grew 8% in 2019, AWEA says*, RENEWABLE ENERGY WORLD (Apr. 10, 2019), https://www.renewableenergyworld.com/articles/2019/04/u-s-wind-capacity-grew-8-in-2018-awea-says.html.

wind energy businesses in the US."[181] In short, BP's relatively small wind power portfolio is materially smaller than that conveyed in the company's advertisements.

187. The same is true for BP's activities in solar energy, which consist predominantly of its purchase of a minority interest in the solar company Lightsource (rebranded Lightsource BP).[182] The purchase price for this interest represents only 0.4% of BP's annual capital expenditure of approximately $16 billion, nearly all of which focuses on fossil fuels.[183] This is a far cry from BP's claim that it was "leaving no stone unturned" to find "new" ways to produce lower-emissions energy and playing a "leading role" in "advancing a low carbon future."

iv. Chevron's Misleading and Deceptive Greenwashing Campaigns

188. Chevron also engaged in greenwashing campaigns designed to deceive consumers about Chevron's products and its commitment to address climate change.

189. Chevron's 2007 "Will You Join Us?" campaign and its 2008 "I Will" campaign both misleadingly portrayed the company as a leader in renewable energy.

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[181] *See* BP, *Blade runners*, https://web.archive.org/web/20191130192545/https://www.bp.com/en/global/corporate/who-we-are/possibilities-everywhere/wind-and-natural-gas.html.

[182] BP ANNUAL REPORT AND FORM 20-F 42 (2017), https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/investors/bp-annual-report-and-form-20f-2017.pdf.

[183] *See BP to maintain reduced capital spending through 2021*, OIL & GAS JOURNAL (Feb. 28, 2017), https://www.ogj.com/general-interest/article/17290398/bp-to-maintain-reduced-capital-spending-through-2021.

The campaigns' advertisements, portrayed minor changes in consumer choices (e.g., changing light bulbs) as sufficient to address environmental problems such as climate change.[184]

190. The overall thrust of the campaigns was to shift the perception of fault and responsibility for global warming to consumers and make Chevron's role and that of the broader fossil fuel industry appear small. The misleading solution promoted to consumers was not to switch away from fossil fuels, but instead to implement small changes in consumer behavior with continued reliance on fossil fuel products. By portraying greenhouse gas emissions as deriving from numerous sources in addition to fossil fuels, Chevron's ads obfuscated the fact that fossil fuels are the primary cause of increased greenhouse gas emissions and the primary driver of climate change.

191. Misleading messages were emblazoned over images of everyday Americans, as in the example highlighted below:

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[184] *See* Duncan MaCleod, *Chevron Will You Join Us?*, INSPIRATION ROOM (Oct. 9, 2007), http://theinspirationroom.com/daily/2007/chevron-will-you-join-us*; see also* Jean Halliday, *Chevron: We're Not Big Bad Oil*, ADAGE (Sept. 28, 2007), https://adage.com/article/news/chevron-big-bad-oil/120785.

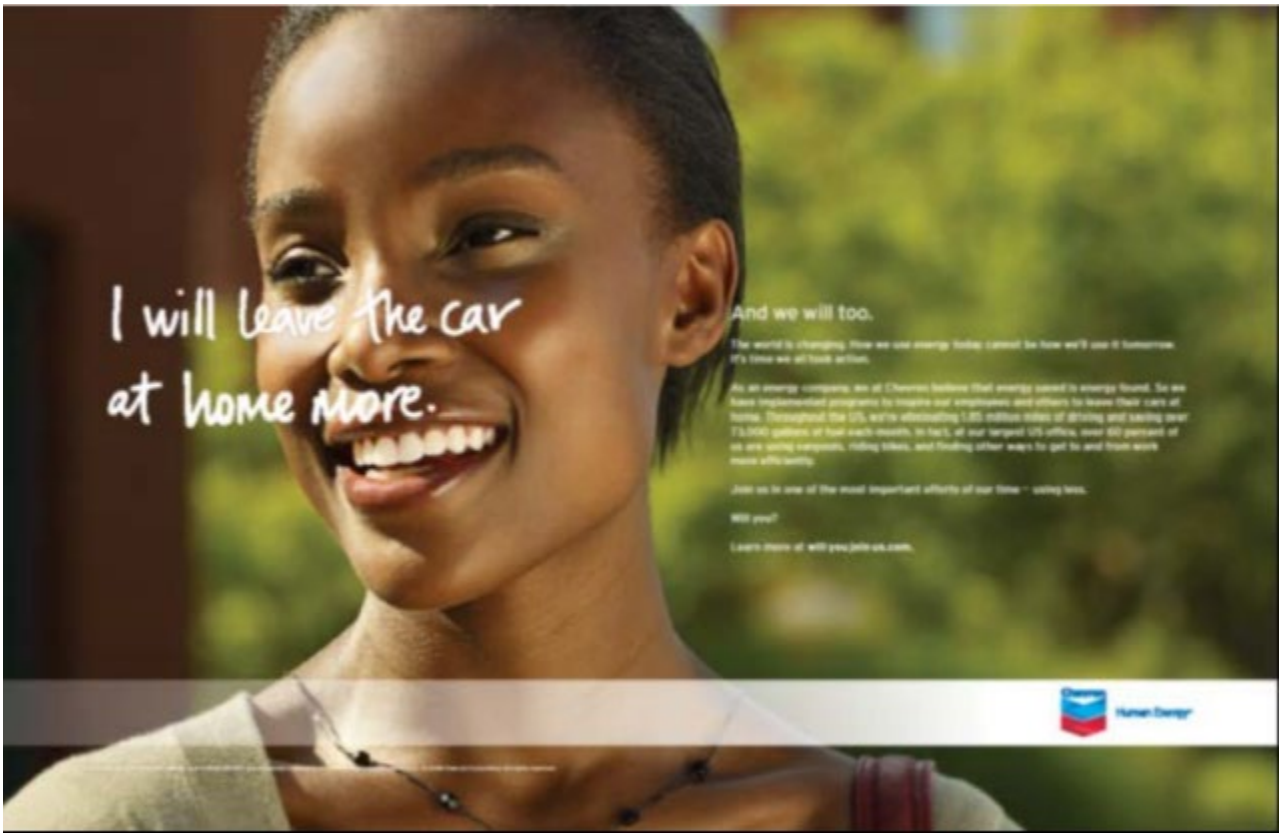

Figure 8: "Will You Join Us?" Chevron advertisement

192. In 2010, Chevron launched an advertising campaign titled "We Agree." The print, internet, and television ad campaign expanded across the United States and internationally. For example, the ad below highlighted Chevron's supposed commitment to the development of renewable energy, stating in large letters next to a photo of a young girl, "It's time oil companies get behind the development of renewable energy. We agree." The ad emphasized: "We're not just behind renewables. We're tackling the challenge of making them affordable and reliable on a large scale."

Figure 9: "We Agree" Chevron advertisement

193. Chevron's portrayal of itself as a renewable energy leader was false and misleading. In reality, only 0.2% of Chevron's capital spending from 2010 to 2018 was in low-carbon energy sources and 99.8% was in continued fossil fuel exploration and development—a stark contrast to the message communicated to consumers through the company's advertisements.[185]

194. Chevron's "We Agree" campaign also featured misleading television advertisements. In one focused on renewable energy, a teacher says, "Ok, listen. Somebody has got to get serious. We need renewable energy." To which a Chevron environmental operations employee responds, "At Chevron we're investing millions

[185] Raval & Hook, *supra* note 157.

in solar and biofuel technologies to make it work." In reality, Chevron has continued to overwhelmingly focus on fossil fuel extraction and development, and its investment of "millions" in renewables is miniscule in comparison to its investment of billions in fossil fuels.

195. A 2019 Chevron advertisement currently available on the *New York Times* website similarly touts the supposed benefits of expanded natural gas production for "unprecedented reductions in U.S. energy-related carbon emissions."[186] But this statement is misleading because the reference to "emissions" relies on studies that measure only CO_2 and ignore other important greenhouse gases, including methane, thereby painting an inaccurate and incomplete picture of natural gas's climate impacts.

v. Marathon's Misleading and Deceptive Greenwashing Campaigns

196. Like other Fossil Fuel Defendants, Marathon has sought to project an environmentally friendly public image in its advertising, stating, "We have invested billions of dollars to make our operations more energy efficient [and] reduce our

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[186] Chevron, *How Abundant Energy Is Fueling U.S. Growth* (Chevron Paid Post), N.Y. TIMES (2019), https://www.nytimes.com/paidpost/chevron/how-abundant-energy-is-fueling-us-growth.html.

emissions."[187] Yet only 1% of the company's capital spend from 2010 to 2018 was on low carbon energy sources, all of which was in carbon capture and storage.[188]

vi. ConocoPhillips's Misleading and Deceptive Greenwashing Campaigns

197. ConocoPhillips ran hundreds of ads in Delaware as part of its "Power in Cooperation" ad campaign, including an advertisement that stated: "Natural Gas: Efficient. Affordable. Environmentally-friendly. Learn how natural gas is meeting global energy demand while reducing climate-related risks."[189] However, the production and transportation of natural gas results in significant emissions of methane, which can warm the planet more than 80 times as much as carbon dioxide over a 20-year period.[190]

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[187] MARATHON PETROLEUM CORP., PERSPECTIVES ON CLIMATE-RELATED SCENARIOS (Oct. 2018), https://www.marathonpetroleum.com/content/documents/Responsibility/MPC-ClimateReport-2018.pdf.

[188] Raval & Hook, *supra* note 157.

[189] Facebook Ad Library, https://www.facebook.com/ads/library/?id=144267019769620.

[190] Jonah Kessel & Hiroko Tabuchi, *It's a Vast, Invisible Climate Menace. We Made It Visible.* N.Y. TIMES (Dec. 12, 2019), https://www.nytimes.com/interactive/2019/12/12/climate/texas-methane-super-emitters.html.

vii. API's Misleading and Deceptive Greenwashing Campaigns

198. API has also devoted considerable resources to deceiving consumers throughout the country about fossil fuels' role in climate change. During the 2017 Super Bowl, the most-watched television program in the United States, API debuted its "Power Past Impossible" campaign, with advertisements that told Americans that the petroleum industry could help them "live better lives." A 2018 study of the advertisements by Kim Sheehan, a Professor at the University of Oregon, concluded that the "campaign provides evidence of greenwashing through both explicit communications (such as unsubstantiated claims that 'gas comes cleaner' and 'oil runs cleaner') and implicit communications (the use of green imagery)."[191]

199. In lockstep with its member companies, API has also shifted its messaging from climate denial to greenwashing in the last decade. API touts its members' purported commitments to reducing their carbon footprint while continuing its core mission of promoting its members' extraction, production, and sale of fossil fuels to consumers in Delaware and throughout the United States at unprecedented rates.

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[191] Kim Sheehan, *This Ain't Your Daddy's Greenwashing: An Assessment of the American Petroleum Institute's Power Past Impossible Campaign*, *in* INTELLECTUAL PROPERTY AND CLEAN ENERGY 301–21 (Matthew Rimmer ed., 2018).

200. Many of API's television, radio, and internet advertisements, including those directed at Delaware consumers, lead to a website run by API entitled "America's Natural Gas and Oil: Energy for Progress." Among many articles and images promoting fossil fuel companies' claimed contributions to clean energy, the website advertises "5 Ways We're Helping to Cut Emissions" and "4 Ways We're Protecting Wildlife."[192] These messages are not meant to encourage consumers to transition to low carbon energy sources—just the opposite. By obfuscating the reality that fossil fuels are the driving force behind anthropogenic climate change, they are designed to increase consumers' use of fossil fuels in order to advance API's core mission of growing its member companies' oil and natural gas businesses.

201. As part of its "Energy for Progress" campaign, API has run a series of Facebook advertisements, many of which have reached a substantial number of Delaware consumers, that falsely paint the fossil fuel industry as a leader on climate change action. For example, in 2020, API ran advertisements with statements such as:

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[192] *See* American Petroleum Institute, *5 Ways We're Using Energy for Progress*, ENERGY FOR PROGRESS, https://energyforprogress.org/the-basics.

- "We can tackle climate change and meet the world's energy needs by embracing new innovations together."[193]
- "Through innovative partnerships, we've reduced CO_2 emissions to the lowest in a generation—and now we're working to reduce methane, too."[194]
- "How are natural gas and oil companies helping cars emit less CO_2? They've developed engine oils that improve fuel efficiency. See the science."[195]

G. Defendants Also Made Misleading Claims About Specific "Green" or "Greener" Fossil Fuel Products.

202. Defendants also have engaged in extensive and highly misleading marketing efforts aimed at promoting certain of their fossil fuel products as "green" and environmentally beneficial.

203. Defendants' advertising and promotional materials fail to disclose the extreme safety risk associated with the use of fossil fuel products, which are causing "catastrophic" climate change, as understood by Defendants for decades.

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[193] *See* Facebook Ad Library, https://www.facebook.com/ads/library/?id=281395386281089.

[194] *See* Facebook Ad Library, https://www.facebook.com/ads/library/?id=640075440224515.

[195] *See* Facebook Ad Library, https://www.facebook.com/ads/library/?id=1883177471814564.

Defendants continue to omit that important information to this day, consistent with their goal of maintaining consumer demand for their fossil fuel products despite the risks they pose for the planet and its people.

204. Defendants misleadingly represent that consumer use of certain fossil fuel products actually helps customers reduce emissions and gain increased fuel economy. But hyping relative climate and "green" benefits while concealing the dangerous effects of continued high rates of fossil fuel use creates an overall misleading picture that hides the dire climate impacts resulting from normal consumer use of Defendants' fossil fuel products. Contrary to Defendants' "green" claims, the development, production, refining, and consumer use of Defendants' fossil fuel products (even products that may yield relatively more efficient engine performance) *increase* greenhouse gas emissions to the detriment of public health and consumer welfare.

205. In addition, at the same time Fossil Fuel Defendants have been actively promoting their "greener" gasoline products at Delaware gas stations and on their company websites, Fossil Fuel Defendants have been massively expanding fossil fuel production and increasing emissions. If consumers understood the full degree to which Fossil Fuel Defendants' products contributed to climate change and that Fossil Fuel Defendants had not in fact materially invested in alternative energy

sources or were otherwise environmentally cautious, they likely would have acted differently, e.g., by not purchasing Defendants' products or purchasing less of them.

206. In the promotion of these and other fossil fuel products, including at their branded gas stations in Delaware, Defendants fail to disclose the fact that fossil fuels are a leading cause of climate change and that current levels of fossil fuel use—even purportedly "cleaner" or more efficient products—represent a direct threat to Delawareans and the environment. Defendants' omissions in this regard are consistent with their goal of influencing consumer demand for their fossil fuel products through greenwashing. Defendants also fail to require their vendors and third-party retail outlets to disclose facts pertaining to the impact the consumption of fossil fuels and their "cleaner" alternatives have on climate change when selling Defendants' products.

207. Defendants' marketing of these fossil fuel products to Delaware consumers as "safe," "clean," emissions-reducing," and impliedly beneficial to the climate—when production and use of such products is the leading cause of climate change—is reminiscent of the tobacco industry's effort to promote "low-tar" and "light" cigarettes as an alternative to quitting smoking after the public became aware of the life-threatening health harms associated with smoking.

208. Defendants' product promotions are positioned to reassure consumers that purchase and use of their products is beneficial in addressing climate change,

when in truth, continued use of such fossil fuels is extremely harmful, just as the tobacco companies' misleadingly promoted "low tar" and "light" cigarettes as a healthier, less harmful choice, when the tobacco companies knew any use of cigarettes was harmful.

209. As with tobacco companies' misleading use of scientific and engineering terms in advertising to enhance the credibility of their representations, Defendants' promotional materials for their fossil fuel products also misleadingly invoke similar terminology to falsely convey to Delaware consumers that the use of these products benefits the environment. For example, Exxon's advertisements of its Synergy™ and "green" Mobil 1™ products similarly reference "meticulous[] engineer[ing]," "breakthrough technology," "rigorously tested in the lab," "proprietary formulation," "test data," "engineers," "innovat[ion]," and the claim that "Scientists Deliver [] Unexpected Solution[s]."[196] Shell advertises that its Shell Nitrogen Enriched Cleaning System and V-Power Nitro+ Premium "produce[] fewer emissions" and that not using them can lead to "higher emissions."[197] BP markets

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[196] *See, e.g.*, EnergyFactor by ExxonMobil, *Green motor oil? ExxonMobil scientists deliver an unexpected solution* (July 19, 2016), https://energyfactor.exxonmobil.com/science-technology/green-motor-oil-exxonmobil-scientists-deliver-unexpected-solution; Exxon Mobil, *Fuels*, https://www.exxon.com/en/fuels.

[197] *See, e.g.*, Shell, *Shell Nitrogen Enriched Gasolines*, https://www.shell.us/motorist/shell-fuels/shell-nitrogen-enriched-gasolines.html.

its Invigorate gasoline as a "cleaning agent that helps … give you more miles per tank," and "help[s] cars become clean, mean, driving machines," and its bp Diesel as "a powerful, reliable, and efficient fuel made … to help reduce emissions."[198] Chevron advertises its Techron fuel with claims that emphasize its supposed positive environmental qualities, such as: "less is more," "minimizing emissions," and "up to 50% cleaner."[199] In a Q and A on Chevron's website, one question says, "I care for the environment. Does Techron impact my car's emissions?" Chevron answers that "[g]asolines with Techron" clean up carburetors, fuel injectors, and intake valves, "giving you reduced emissions."[200]

210. These misrepresentations, which were intended to and did in fact reach and influence Delaware consumers, were misleading because they emphasize the fuels' supposedly environmentally beneficial qualities without disclosing the key role fossil fuels play in causing climate change.

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[198] *See, e.g.*, BP, *Our Fuels*, https://www.bp.com/en_us/united-states/home/products-and-services/fuels.html.

[199] *See, e.g.*, Chevron, *Techron*, https://www.techron.com.

[200] *Id.*

H. Defendants Intended for Consumers to Rely on their Concealments and Omissions Regarding the Dangers of Their Fossil Fuel Products.

211. Consumer use of fossil fuel products, particularly by driving gasoline-powered cars and other vehicles, is a significant contributor to climate change.

212. By misleading Delaware consumers about the climate impacts of using fossil fuel products, even to the point of claiming that certain of their products may benefit the environment, and by failing to disclose to consumers the climate risks associated with their purchase and use of those products, Defendants have deprived and are continuing to deprive consumers of information about the consequences of their purchasing decisions.

213. In addition to Defendants misleading Delaware consumers by affirmatively misrepresenting the state of their and the scientific community's knowledge of climate change and by failing to disclose the dangerous effects of using their products, Defendants have sought to mislead consumers, and induce purchases and brand affinity, with greenwashing advertisements designed to represent Defendants as environmentally responsible companies developing innovative green technologies and products. In reality, Defendants' investment in renewable energy sources is miniscule and their business models continue to center on developing, producing, and selling more of the very same fossil fuel products driving climate change.

214. Defendants intended for Delaware consumers to rely on their omissions and concealments and to continue purchasing Defendants' fossil fuel products without regard for the damage such products cause.

215. Knowledge of the risks associated with the routine use of fossil fuel products is material to Delaware consumers' decisions to purchase and use those products.

216. As in the case of cigarettes, history demonstrates that when consumers are made aware of the harmful effects or qualities of the products they purchase, they often choose not to purchase them, to reduce their purchases, or to make different purchasing decisions. This phenomenon holds especially true when products have been shown to harm public health or the environment. For example, increased consumer awareness of the role of pesticides in harming human health, worker health, and the environment has spurred a growing market for food grown organically and without the use of pesticides. With access to information about how their food is grown, consumers have demanded healthier choices, and the market has responded.

217. There are now various local government initiatives to require climate change warning labels on gasoline pumps based on the principle that consumers will change their purchasing decisions when they have direct access to accurate information about the connection between their consumption of fossil fuels and

climate change. Similar to health warnings on tobacco products, which aim to educate consumers and thereby reduce public health risks, governments recognize that fossil fuel warning labels that accurately relay risk can educate consumers and thereby reduce the risks and costs associated with climate change.

218. For example, a consumer who received accurate information that fossil fuel use was a primary driver of climate change and the resultant dangers to the environment and people might purchase less fossil fuel products, or decide to buy none at all. Consumers might opt to avoid or combine car travel trips; carpool; switch to more fuel-efficient vehicles, hybrid vehicles, or electric vehicles; use a car-sharing service; seek transportation alternatives all or some of the time, if available (e.g., public transportation, biking, or walking); or adopt any combination of these choices. In addition, informed consumers contribute toward solving environmental problems by supporting companies that they perceive to be developing "green" or more environmentally friendly products.

I. Defendants' Deceit Only Recently Became Discoverable, and Their Misconduct Is Ongoing.

219. The fact that Defendants and their proxies knowingly provided incomplete and misleading information to the public, including Delaware consumers, only recently became discoverable due to, among other things: Defendants' above-described campaign of deception, which continues to this day;

Defendants' efforts to discredit climate change science and create the appearance such science is uncertain; Defendants' concealment and misrepresentations regarding the fact that their products, including natural gas, cause catastrophic harms; and the fact that Defendants used front groups such as API, the Global Climate Coalition, and the National Mining Association to obscure their involvement in these actions, which put the State off the trail of inquiry.

220. Moreover, Defendants' tortious misconduct, in the form of misrepresentations, omissions, and deceit, began decades ago and continues to this day. As described above, Defendants continue to misrepresent their own activities, the fact that their products cause climate change, and/or the danger presented by climate change, directly and/or through membership in other organizations. Exemplars of Defendants' continuing misrepresentations, omissions, and deceit follow below.

221. As recently as June 2018, a post on the official Shell blog stated: "… the potential extent of change in the climate itself could now be limited. In other words, the prospect of runaway climate change might have passed."[201] However, this

[201] David Hone, *Has climate change run its course??*, Shell Climate Change Blog (June 14, 2018), https://blogs.shell.com/2018/06/14/has-climate-change-run-its-course.

statement is not supported by valid scientific research, and was and is contradicted by various studies.[202]

222. In March 2018, Chevron issued a report entitled "Climate Change Resilience: A Framework for Decision Making," which misleadingly stated that "[t]he IPCC Fifth Assessment Report concludes that there is warming of the climate system and that warming is due in part to human activity."[203] In reality, the Fifth Assessment report concluded that "[i]t is *extremely likely* [defined as 95–100% probability] that human influence has been the *dominant cause* of the observed warming since the mid-20th century."[204]

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[202] *See, e.g.*, Fiona Harvey, *Carbon emissions from warming soils could trigger disastrous feedback loop*, THE GUARDIAN (Oct. 5, 2017), https://www.theguardian.com/environment/2017/oct/05/carbon-emissions-warming-soils-higher-than-estimated-signalling-tipping-points; Jonathan Watts, *Domino-effect of climate events could move Earth into a 'hothouse' state*, THE GUARDIAN (Aug. 7, 2018), https://www.theguardian.com/environment/2018/aug/06/domino-effect-of-climate-events-could-push-earth-into-a-hothouse-state; Fiona Harvey, *'Tipping points' could exacerbate climate crisis, scientists fear*, THE GUARDIAN (Oct. 9, 2018), https://www.theguardian.com/environment/2018/oct/09/tipping-points-could-exacerbate-climate-crisis-scientists-fear.

[203] CHEVRON, CLIMATE CHANGE RESILIENCE: A FRAMEWORK FOR DECISION MAKING 20 (Mar. 2018), https://www.chevron.com/-/media/shared-media/documents/climate-change-resilience.pdf.

[204] IPCC, SUMMARY FOR POLICYMAKERS: WORKING GROUP I CONTRIBUTION TO THE FIFTH ASSESSMENT REPORT 17 (2013), https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_SPM_FINAL.pdf.

223. Despite this fact, in April 2017, Chevron CEO and Chairman of the Board John Watson said on a podcast, "There's no question there's been some warming; you can look at the temperatures data and see that. The question and debate is around how much, and how much is caused by humans."[205]

224. Similarly, ConocoPhillips's "Climate Change Position" as it currently appears on the company's website states that human activity is "contributing to" climate change and emphasizes "uncertainties," even though the science is clear: "ConocoPhillips recognizes that human activity, including the burning of fossil fuels, is contributing to increased concentrations of greenhouse gases (GHG) in the atmosphere that can lead to adverse changes in global climate. While uncertainties remain, we continue to manage greenhouse gas emissions in our operations and to integrate climate change related activities and goals into our business planning."[206]

225. In 2015, then-Exxon Mobil CEO Rex Tillerson argued that climate models were not strong enough to justify a shift away from fossil fuels, saying: "What if everything we do, it turns out our models are lousy, and we don't get the

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[205] Columbia Energy Exchange Podcast, *John Watson, CEO, Chevron* (Apr. 10, 2017), *available at* https://www.energypolicy.columbia.edu/us-energy-markets-policy.

[206] ConocoPhillips, *Climate Change Position*, http://www.conocophillips.com/sustainability/integrating-sustainability/sustainable-development-governance/policies-positions/climate-change-position.

effects we predict? Mankind has this enormous capacity to deal with adversity, and those solutions will present themselves as those challenges become clear."[207]

J. The State Has Suffered, Is Suffering, and Will Suffer Injuries from Defendants' Wrongful Conduct.

226. Defendants' individual and collective conduct, including, but not limited to, their failures to warn of the threats their fossil fuel products posed to the world's climate; their wrongful promotion of their fossil fuel products and concealment of known hazards associated with use of those products; their public deception campaigns designed to obscure the connection between their products and global warming and its environmental, physical, social, and economic consequences; is a direct and proximate cause that brought about or helped bring about global warming and consequent sea level rise and attendant flooding, erosion, and loss of wetlands and beaches in Delaware; increased frequency and intensity of extreme weather events in Delaware, including coastal storms, flooding, drought, extreme heat, extreme precipitation events, and others; ocean warming and acidification; and the cascading social, economic, and other consequences of these environmental

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[207] Dallas Morning News, *Exxon CEO: Let's wait for science to improve before solving problem of climate change* (May 27, 2015), https://www.dallasnews.com/business/energy/2015/05/28/exxon-ceo-let-s-wait-for-science-to-improve-before-solving-problem-of-climate-change.

changes. These adverse impacts will continue to increase in frequency and severity in Delaware.[208]

227. As actual and proximate results of Defendants' conduct, which caused the aforementioned environmental changes, the State has suffered and will continue to suffer severe harms and losses, including, but not limited to: injury or destruction of State-owned or operated facilities and property deemed critical for operations, utility services, and risk management, as well as other assets that are essential to community health, safety, and well-being; increased planning and preparation costs for community adaptation and resiliency to global warming's effects; and increased costs associated with public health impacts.

228. The State already has incurred, and will foreseeably continue to incur, injuries and damages due to Defendants' conduct, their contribution to the climate crisis, and the environmental, physical, social, and economic consequences of the climate crisis's impact on the environment. As a result of Defendants' wrongful conduct described in this Complaint, Delaware, has, is, and will experience significant adverse impacts including, but not limited to the following:

a. Delaware has already experienced over one foot of sea level rise and associated impacts, and will experience significant additional and accelerating

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[208] *See, e.g.*, ALL-HAZARD MITIGATION PLAN, *supra* note 9.

sea level rise over the coming decades, which would cause severe harm to the State.[209] Delaware is the state with the lowest mean elevation in the nation, and over five percent of Delaware's land area lies within the 100-year coastal floodplain.[210] Indeed, 22,000 Delaware residents are already at risk of coastal flooding, and many thousands more will face flooding risk in the coming decades.[211] For instance, substantial flooding from climate change is expected in east and south Wilmington, an area whose poverty rates reach up to 32 percent. Saltwater intrusion into groundwater will also contaminate the State's drinking water supply, with thousands of domestic wells and thousands of septic systems potentially inundated by a 1.5 meter sea level rise. Large areas of Delaware's agricultural industry, which contributes more than a billion dollars in economic impact to the State, could also be impacted by saltwater intrusion from sea level rise and suffer the resulting loss of productivity of those areas. Sea level rise will threaten over $1 billion in property value,[212] and the loss of Delaware's beaches, or need for continual, expensive beach

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[209] Delaware Geological Survey, University of Delaware, *Determination of Future Sea-Level Rise Planning Scenarios for Delaware*, https://www.dgs.udel.edu/projects/determination-future-sea-level-rise-planning-scenarios-delaware.

[210] *See* States at Risk, *Delaware Coastal Flooding*, https://statesatrisk.org/delaware/coastal-flooding.

[211] *Id*.

[212] ClimateCentral Risk Finder, *Delaware: What is at Risk?*, https://riskfinder.climatecentral.org/state/delaware.us.

replenishment, combined with the risk to coastal transportation and other infrastructure, will harm the State's $3.5 billion tourism industry and the 44,000 people who work in tourism.[213] The State-owned Port of Wilmington, an economic driver, faces severe structural damage due to sea level rise. Much of the land currently used in the State for heavy industry will likely also be inundated, potentially releasing contaminated material. Sea level rise will likely affect 89 EPA-listed contamination sites, including 10 brownfields, three oil facilities, one sewage plant, four extreme hazmat facilities, and 54 hazardous waste sites.[214] Many publicly owned roads and highways in the State are already prone to flooding, including Delaware Route 9, which is designated as a hurricane evacuation route. In the coming decades, sea level rise will threaten over 400 miles of roadway, including 62 miles of state roads, and many miles of evacuation routes.[215] Higher sea levels are already submerging lowlands, exacerbating coastal flooding, and inundating natural resources and the State's property and infrastructure, causing damage and preventing its normal use. The destructive force and flooding potential from storm surges during coastal storms and other weather events have increased as the mean sea level

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[213] *See* DELAWARE TOURISM OFFICE, 2018 VALUE OF TOURISM REPORT 3, *available at* https://www.visitdelaware.com/industry/tourism-statistics.
[214] ClimateCentral Risk Finder, *Delaware: What is at Risk?*, https://riskfinder.climatecentral.org/state/delaware.us.
[215] *Id.*

of Delaware has increased, and the combined effects of storm surge and sea level rise will continue to exacerbate flooding impacts on the State. Even if all carbon emissions were to cease immediately, Delaware would continue to experience sea level rise due to the "locked in" greenhouse gases already emitted and the lag time between emissions and sea level rise.

b. The State has incurred significant costs on projects to address sea level rise, including, but not limited to, by conducting comprehensive surveys of sea level rise threats to the State, conducting sea level rise analysis in certain transportation infrastructure projects, by raising roads and highways such as Route 1, a section of which was raised to reduce coastal flooding, reconstructing and reinforcing levees and dikes, and restoring dams. Sea level rise and coastal storms have also exacerbated erosion. Delaware frequently spends significant resources on beach nourishment and other projects to combat erosion and protect natural, economic, and cultural resources. For example, in 2019 alone, Delaware announced beach nourishment projects for the communities of Pickering Beach, Kitts Hummock, and Bowers Beach, and the City of Rehoboth costing the State millions of dollars.[216] The State of Delaware All-Hazard Mitigation Plan estimated shoreline

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[216] *See, e.g.*, Press Release, State of Delaware, *DNREC Shoreline & Waterway Management beach replenishment projects set for Pickering, Kitts Hummock and*

protection measures, including inlet stabilization, beach nourishment and dune restoration to address coastal riverine and storm surge flooding to cost $10 to 20 million annually.[217]

c. Global warming is causing more extreme weather events in Delaware, with attendant physical and environmental consequences, including coastal flooding, coastal erosion, inland flooding, extreme heat events, dam and levee failures, and drought.[218] Coastal storms have already caused tens of millions of dollars in damages in Delaware, along with floods, power outages, sewage spills, and other disasters. Low-income Delawareans who depend on public transportation to access their employment are particularly vulnerable to flooding that accompanies coastal storms and other extreme weather events, as such flooding often disrupts delivery of public transportation services. In the coming decades, increased rainfall and windspeeds during already-destructive coastal storms will cause even more severe damage to public and private property and infrastructure in Delaware.

Bowers beaches (Jan. 4, 2019), https://news.delaware.gov/2019/01/04/dnrec-shoreline-waterway-management-beach-replenishment-projects-set-pickering-kitts-hummock-bowers-beaches; Press Release, State of Delaware, *Rehoboth Beach nourishment project to begin under direction of DNREC, US Army Corps of Engineers* (Oct. 21, 2019), https://news.delaware.gov/2019/10/21/rehoboth-beach-nourishment-project-to-begin-under-direction-of-dnrec-us-army-corps-of-engineers.

[217] ALL-HAZARD MITIGATION PLAN, *supra* note 9, at § 6.2, p. 20.

[218] *Id*. at § 4.1.

d. Oceans are acidifying at an alarming rate because of fossil-fuel burning, endangering Delaware's coastal ecosystems and economy. Acidity levels have already increased by roughly 30 percent since the Industrial Revolution, and they are expected to rise at a faster rate over time.[219] This radical change in ocean chemistry has serious and far reaching consequences. For example, the accumulation of carbonic acid in coastal waters threatens the survival of organisms that build shells and skeletons from calcium carbonate—such as coral, crabs, oysters, and shrimp.[220] It also risks destabilizing whole marine ecosystems by altering the behavior, growth, reproduction, and migration patterns of critical aquatic organisms.[221] Delaware is particularly vulnerable to the effects of human-caused ocean acidification, as its identity, industries, and economy are closely intertwined with its coastal waters, saltwater wetlands, bays, and estuaries. Indeed, the Chesapeake Bay alone is responsible for nearly 13,000 Delawarean jobs, and the

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[219] JEAN BRODEUR, UNIVERSITY OF DELAWARE & DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL, DELAWARE AND OCEAN ACIDIFICATION: PREPARING FOR A CHANGING OCEAN 12 (2015), http://www.dnrec.delaware.gov/coastal/Documents/OceanAcidification.pdf.

[220] *Id.* at 4.

[221] *Id.* at 14–15.

economic value of commercial and recreational fishing in the State totals to more than $100 million each year.[222]

e. The average air temperature has increased and will continue to increase in Delaware due to climate change. By 2050, parts of Delaware are expected to endure up to 40 days per year of temperatures with a heat index above 105°F.[223] Warming air temperatures have and will led to poorer air quality, more heat waves, expanded pathogen and pest ranges, impacts on agricultural production, greater need for irrigation of agricultural production, increased costs of cooling and other expenses to poultry industry, thermal stress for native flora and fauna, increased electricity demand, and threats to human health such as from heat stroke and dehydration, due to increased evaporation and demand, and increased allergen exposure. Higher average and more frequent extreme temperatures are expected to drive up energy use due to increased air-conditioning use. By 2060, Delaware is projected to see up to a 70 percent increase in demand for cooling.[224] More than 20,000 Delawareans are especially vulnerable to extreme heat due to their age or

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[222] *Id.* at 24–25.

[223] *See* States at Risk, *Delaware Extreme Heat*, https://statesatrisk.org/delaware/extreme-heat.

[224] DCCIA at 4-20.

economic status.[225] Due to systemic inequities, communities of color and low-income communities are particularly vulnerable to extreme heat events. "Pregnant women exposed to high temperatures or air pollution are more likely to have children who are premature, underweight or stillborn, and African-American mothers and babies are harmed at a much higher rate than the population at large."[226] The urban heat island effect, which affects cities including Wilmington, exacerbates the health impacts of extreme heat on communities of color and low-income communities in urban areas. Delawareans who face housing insecurity are also more vulnerable to the extreme temperatures and air pollution exacerbated by climate change.

f. Climate change is stressing important natural and cultural resources in Delaware.[227] Nearly a quarter of Delaware's land consists of wetlands, which will face significant damage due to climate change by the end of the century. Delaware's beaches and marshes provide habitat for fish, reptiles, and birds, such as horseshoe crabs, Atlantic sturgeon, and red knots. Delaware's marshes also provide valuable ecosystem services to the State, including by filtering water contaminants,

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[225] *See* States at Risk, *Delaware Extreme Heat*, https://statesatrisk.org/delaware/extreme-heat.

[226] Christopher Flavelle, *Climate Change Tied to Pregnancy Risks, Affecting Black Mothers Most*, N.Y. TIMES (June 18, 2020), https://www.nytimes.com/2020/06/18/climate/climate-change-pregnancy-study.html.

[227] DNREC, SEA LEVEL RISE VULNERABILITY ASSESSMENT at 89–90.

mitigating storm damage, and supporting the State's fishing and hunting industries. Delaware is a hemispherically important area to migratory birds, with harm to Delaware wetlands and coastal areas impacting the reproductive success of many migratory birds, such as red knots. Delaware is likewise a particular center for horseshoe crab spawning, with harm to their habitat impacting food chains, numerous migratory bird species, and potentially significant impacts on human health given the role of horseshoe crabs in medical and biomedical research.

g. Agriculture is an essential driving force of Delaware's economy. Almost 40 percent of Delaware's land is dedicated to agricultural production, and sole or family proprietorship account for the vast majority of the State's farms.[228] By exacerbating extreme weather and rising seas, climate change has already and will continue to have major impacts on agriculture in Delaware. Delaware's agricultural industry has already suffered significantly because of extreme weather. The 2018 State of Delaware All-Hazard Mitigation Plan estimated nearly $8 million in annualized expected losses from drought events across the State, primarily due to crop and farmland damage.[229] In low-lying areas, soil may become too salty for

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[228] Delaware Department of Agriculture, *Delaware Agricultural History*, https://agriculture.delaware.gov/agricultural-history.

[229] ALL-HAZARD MITIGATION PLAN, *supra* note 9, at § 4.2, p. 62–63.

crops as saltwater intrusion progresses due to sea level rise.[230] Higher temperatures and changing rainfall patterns are likely to have negative effects on crops and livestock, such as crop losses; reduced yield from heavy precipitation, heat, or drought; heat stress on livestock; increased difficulty of nutrient management; and higher infrastructure, irrigation, and energy costs. For example, hotter summers are expected to reduce corn yields. Warmer winters may also increase competition for crops from weeds and insect pests.[231] Severe rainstorms, expected to increase in frequency, can also have serious consequences for crop production, delaying planting or washing out planted crops and increasing disease. In terms of livestock, increased heat stress, extreme weather, and drought are likely to affect animal health and reduce feed and growth efficiency for poultry and dairy cows.[232]

h. Climate change has caused and will cause significant public health-related injuries to Delaware and its residents.[233] Greater numbers of extreme

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[230] U.S. Environmental Protection Agency, *What Climate Change Means for Delaware* (Aug. 2016), https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-de.pdf.

[231] DCCIA at 7-16.

[232] *Id*.

[233] *See, e.g.*, DIV. OF ENERGY AND CLIMATE, DELAWARE DEPT. OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL, DELAWARE CLIMATE HEALTH CONFERENCE SUMMARY REPORT (2017), https://dnrec.alpha.delaware.gov/climate-coastal-energy/climate-change/climate-health-conference.

heat events in Delaware will result in increased risk of heat-related illnesses (from mild heat stress to fatal heat stroke) and the exacerbation of pre-existing conditions in the medically fragile, chronically ill, and vulnerable. Changes in air temperature, rain and carbon dioxide concentrations in air can lead to more ozone, pollen, mold spores, fine particles and chemicals that can irritate and damage the lungs and airways, particularly of those with pre-existing respiratory problems and conditions. Increased extreme temperatures and heat waves has and will contribute to and exacerbate, allergies, respiratory disease, and other health issues in children and adults. Vulnerable populations such as the disabled, the elderly, those with prior health issues, children, people who live alone, people of color, and less-resourced communities are more likely to suffer health effects from higher air temperatures, flooding, and air pollution. As pest seasons and ranges expand, vector-borne illnesses will increase in Delaware's population. The State has borne and will continue to bear costs associated with mitigating and responding to these public health threats.

229. Compounding these physical and environmental impacts are cascading social and economic impacts that cause injuries to the State and that have and will continue to arise out of localized climate change-related conditions.

230. Delaware's low-income communities and communities of color are particularly at risk from the impacts of climate change. Climate change is

exacerbating, and will continue to exacerbate, underlying inequities faced by low-income communities and communities of color, who are disproportionately exposed to environmental hazards and at risk for many health conditions. The racial and ethnic disparities in Delaware's poverty rate[234] further compound the increased risk that Black and brown Delawareans face from climate change, because low-income communities and communities of color are often unable to prepare in advance for events caused or exacerbated by climate change, and are forced to use a bigger proportion of their resources to rebuild in the aftermath - or are unable to rebuild at all. Climate change will also likely increase food insecurity in Delaware, which more than 12 percent of Delawareans already experience.[235]

231. The State has already incurred damages as a direct and proximate result of Defendants' conduct. The State has planned and is planning, at significant expense, adaptation and mitigation strategies to address climate change-related impacts in order to preemptively mitigate and/or prevent injuries to itself and its citizens. These efforts include, but are not limited to, capital projects such as

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[234] Black Delawareans are more than twice as likely to experience poverty than white Delawareans, and Hispanics are approximately three times as likely to live in poverty than non-Hispanic whites. CTR. FOR CMTY. RESEARCH & SERV., AN OVERVIEW OF POVERTY IN DELAWARE 2 (2018), http://udspace.udel.edu/handle/19716/23128.

[235] *Food Insecurity Rate*, Delaware Health Tracker, http://www.delawarehealthtracker.com (last visited Sept. 7, 2020).

improving its drainage system and raising roadways, reconstructing and reinforcing levees and dikes, and restoring dams; partnership initiatives to prepare cities and towns across Delaware for the effects of climate change; and planning efforts such as the development of the DelDOT Strategic Implementation Plan for Climate Change and[236] the creation of a flood avoidance guide for State agencies[237] pursuant to Executive Order 41,[238] through which former Governor Markell took steps to prepare Delaware for emerging climate impacts. Additionally, the State has incurred and will incur significant expense in educating and engaging the public on climate change issues, and implementing policies to mitigate and adapt to climate change impacts, including through clean transportation programs, electric vehicle incentive programs, assisting Delaware residents with home weatherization, providing incentives for building energy efficiency, restoring plant life to lessen heat impacts and reduce tidal flooding, mapping vulnerable populations and disease patterns. The

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[236] DELAWARE DEPT. OF TRANSPORTATION, STRATEGIC IMPLEMENTATION PLAN FOR CLIMATE CHANGE, SUSTAINABILITY & RESILIENCE FOR TRANSPORTATION (2017), https://deldot.gov/Publications/reports/SIP/pdfs/SIP_FINAL_2017-07-28.pdf.

[237] DELAWARE FLOOD AVOIDANCE WORKGROUP, AVOIDING AND MINIMIZING RISK OF FLOOD DAMAGE TO STATE ASSETS: A GUIDE FOR DELAWARE STATE AGENCIES (2016), http://www.dnrec.delaware.gov/energy/Documents/DE%20Flood%20Avoidance%20Guide%20For%20State%20Agencies.pdf.

[238] Exec. Order No. 41 (2013), https://archivesfiles.delaware.gov/Executive-Orders/Markell/Markell_EO41.pdf.

State has already allocated funds to climate adaptation through the Strategic Opportunity Fund for Adaptation, among other sources, and future climate adaptation will come at a substantial cost to the State. The State has incurred costs in responding to incidents such as impacts to water, wastewater, and stormwater infrastructure; flooding; groundwater inundation of infrastructure; erosion; and storm events that injure persons and property within Delaware and/or that the State owns or bears responsibility. The State's property and resources,[239] such as the Port of Wilmington, State Route 9, Red Lion Dike, the St. Jones Reserve, Mispillion Nature Center, Gordon's Pond Trail, Pea Patch Island, various state parks, and the DelDOT Bridgeville Maintenance Yard, have been and will continue be inundated and/or flooded by sea water and extreme precipitation, among other climate-change related intrusions, causing injury and damages thereto and to improvements thereon, and preventing free passage on, use of, and normal enjoyment of that real property, or permanently destroying it.

232. But for Defendants' conduct, the State would have suffered no or far less serious injuries and harms than it has endured, and foreseeably will endure, due to the climate crisis and its physical, environmental, social, and economic consequences.

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[239] Plaintiff disclaims injuries arising on federal property in Delaware.

233. Defendants' conduct as described herein is therefore an actual, direct, and proximate cause of the State's climate crisis-related injuries, and was necessary to those injuries and brought about or helped to bring about those injuries.

V. CAUSES OF ACTION

FIRST CAUSE OF ACTION
(Negligent Failure to Warn)
(Against All Fossil Fuel Defendants)

234. The State realleges each and every allegation contained above, as though set forth herein in full.

235. Fossil Fuel Defendants, and each of them, at all times had a duty to issue adequate warnings to the State, the public, consumers, and public officials, of the reasonably foreseeable or knowable severe risks posed by their fossil fuel products.

236. Throughout the times at issue, Fossil Fuel Defendants breached their duty of care by failing to adequately warn any consumers, including, but not limited to, the State, its residents, and any other party, of the climate effects that inevitably flow from the intended or foreseeable use of their fossil fuel products.

237. Fossil Fuel Defendants knew or should have known, based on information passed to them from their internal research divisions and affiliates, trade associations and industry groups, and/or from the international scientific community, of the climate effects inherently caused by the normal use and operation

of their fossil fuel products, including the likelihood and likely severity of global warming, global and local sea level rise, more frequent and extreme drought, more frequent and extreme precipitation events, increased frequency and severity of heat waves and extreme temperatures, other adverse environmental changes, and the associated consequences of those physical and environmental changes, including the harms and injuries described herein.

238. Fossil Fuel Defendants knew or should have known, based on information passed to them from their internal research divisions and affiliates, trade associations and industry groups, and/or from the international scientific community, that the climate effects described herein rendered their fossil fuel products dangerous, or likely to be dangerous, when used as intended or in a reasonably foreseeable manner.

239. Throughout the times at issue, Fossil Fuel Defendants individually and in concert widely disseminated marketing materials in and outside of Delaware, refuted the scientific knowledge generally accepted at the time, advanced pseudo-scientific theories of their own, and developed misleading public relations materials that prevented reasonable consumers, including, but not limited to, the State and its residents, from recognizing the risk that fossil fuel products would cause grave climate changes, undermining and rendering ineffective any warnings that Fossil Fuel Defendants may have also disseminated. By virtue of this disinformation

campaign, Fossil Fuel Defendants had and have reason to believe that the users of their fossil fuel products are not aware of the risk of harm.

240. Throughout the times at issue, the risks posed by the use of Fossil Fuel Defendants' fossil fuel products were not obvious or generally known and recognized, and users of said products did not have actual knowledge of the danger, because, among other reasons, Fossil Fuel Defendants actively sought to conceal these risks by disseminating marketing materials in and outside of Delaware, refuting the scientific knowledge generally accepted at the time, advancing pseudo-scientific theories of their own, and developing misleading public relations materials.

241. Fossil Fuel Defendants knew or should have known that consumers, including but not limited to the State and its residents, were not aware of the risks posed by the use of Fossil Fuel Defendants' fossil fuel products because, among other reasons, Fossil Fuel Defendants actively sought to conceal these risks by disseminating marketing materials in and outside of Delaware, refuting the scientific knowledge generally accepted at the time, advancing pseudo-scientific theories of their own, and developing misleading public relations materials.

242. Given the grave dangers presented by the climate effects that inevitably flow from the normal or foreseeable use of fossil fuel products, a reasonable manufacturer, seller, or other participant responsible for introducing fossil fuel

products into the stream of commerce, would have warned of those known, inevitable climate effects.

243. Fossil Fuel Defendants' conduct in and outside of Delaware was a direct and proximate cause of the State's injuries, and the harms suffered by the State as alleged herein would not have occurred but for Fossil Fuel Defendants' conduct. Fossil Fuel Defendants' concealment and misrepresentation of their products' known dangers, Fossil Fuel Defendants' failure to warn of those dangers, and Fossil Fuel Defendants' simultaneous promotion of the unrestrained use of their products drove consumption, and thus greenhouse gas pollution, and thus climate change. Fossil Fuel Defendants' conduct brought about the State's injuries and was necessary in bringing about the State's injuries.

244. As a direct and proximate result of Fossil Fuel Defendants' and each of their acts and omissions, the State has sustained and will sustain substantial expenses and damages as set forth in this Complaint, including damage to publicly owned infrastructure and real property, and injuries to public resources that interfere with the rights of the State and its residents.

245. Fossil Fuel Defendants' acts and omissions as alleged herein are indivisible causes of the State's injuries and damage as alleged herein, because, *inter alia*, it is not possible to determine the source of any particular individual molecule of CO_2 in the atmosphere attributable to anthropogenic sources, because such

greenhouse gas molecules do not bear markers that permit tracing them to their source, and because greenhouse gasses quickly diffuse and comingle in the atmosphere.

246. Fossil Fuel Defendants' wrongful conduct as set forth herein was particularly reprehensible and exhibited a wanton or willful disregard for the rights of the State, and was committed with actual malice. Fossil Fuel Defendants had actual knowledge that their products were and are causing and contributing to the injuries complained of, and acted with conscious indifference to the probable dangerous consequences of their conduct's and products' foreseeable impact upon the rights of others, including the State and its residents, motivated primarily by unreasonable financial gain. Fossil Fuel Defendants engaged in persistent distribution of an inherently dangerous product with knowledge of its injury-causing effect among the consuming public. Fossil Fuel Defendants' outrageous conduct exhibits a wanton or willful disregard for the rights of the State. Therefore, the State requests an award of punitive damages in an amount reasonable, appropriate, and sufficient to punish Fossil Fuel Defendants for the good of society and deter Fossil Fuel Defendants from ever committing the same or similar acts.

SECOND CAUSE OF ACTION
(Trespass)
(Against All Fossil Fuel Defendants)

247. The State realleges each and every allegation contained above, as though set forth herein in full.

248. The State has actual and exclusive possession of real property throughout the State of Delaware.

249. Fossil Fuel Defendants, and each of them, have intentionally, recklessly, or negligently caused flood waters, extreme precipitation, saltwater, and other materials, to enter the State's real property, by distributing, merchandising, advertising, promoting, marketing, and/or selling fossil fuel products, knowing with substantial certainty that greenhouse gas emissions from those products would cause global and local sea levels to rise and more frequent and extreme precipitation events to occur, among other adverse environmental changes, as well as the associated consequences of those physical and environmental changes, including the invasion of saltwater onto State properties.

250. The State did not give permission for Fossil Fuel Defendants, or any of them, to cause floodwaters, extreme precipitation, saltwater encroachment, and other materials to enter its property as a result of the use of Fossil Fuel Defendants' fossil fuel products.

251. The State has been and will continue to be actually injured and continues to suffer damages as a result of Fossil Fuel Defendants and each of their having caused flood waters, extreme precipitation, saltwater, and other materials, to enter its real property, by *inter alia* submerging real property owned by the State, causing flooding that has invaded real property owned the State and rendered it unusable, causing storm surges and heightened waves which have invaded and threatened to invade real property owned by the State, and in so doing rendering the State's property unusable.

252. The State has and will continue to spend funds to plan for, prevent, and rectify sea level-rise related damages as a result of Fossil Fuel Defendants and each of their having caused saltwater and other materials to enter and inundate the State's real property.

THIRD CAUSE OF ACTION
(Nuisance)
(Against All Fossil Fuel Defendants)

253. The State realleges each and every allegation contained above, as though set forth herein in full.

254. The Attorney General is authorized to bring suit on behalf of the State and its citizens to address a public nuisance.

255. Fossil Fuel Defendants, individually and in concert with each other, by their affirmative acts and omissions, have created, contributed to, and/or assisted in

creating, conditions that significantly interfere with rights general to the public, including the public health, public safety, the public peace, the public comfort, and the public convenience.

256. The nuisance created and contributed to by Fossil Fuel Defendants is substantial and unreasonable. It has caused, continues to cause, and will continue to cause far into the future, significant harm to the community as alleged herein, and that harm outweighs any offsetting benefit. The health and safety of Delawareans is a matter of great public interest and of legitimate concern.

257. Fossil Fuel Defendants specifically created, contributed to, and/or assisted, and/or were a substantial contributing factor in the creation of the public nuisance by, *inter alia*:

a. Controlling every step of the fossil fuel product supply chain, including the extraction of raw fossil fuel products, including crude oil, coal, and natural gas from the Earth; the refining and marketing of those fossil fuel products, and the placement of those fossil fuel products into the stream of commerce;

b. Affirmatively and knowingly promoting the sale and use of fossil fuel products that Fossil Fuel Defendants knew to be hazardous and knew would cause or exacerbate global warming and related consequences, including, but not limited to, sea level rise, drought, extreme precipitation events, and extreme heat events;

c. Affirmatively and knowingly concealing the hazards that Fossil Fuel Defendants knew would result from the normal use of their fossil fuel products by misrepresenting and casting doubt on the integrity of scientific information related to climate change;

d. Disseminating and funding the dissemination of information intended to mislead customers, consumers, and regulators regarding known and foreseeable risk of climate change and its consequences, which follow from the normal, intended use of Fossil Fuel Defendants' fossil fuel products;

e. Affirmatively and knowingly campaigning against the regulation of their fossil fuel products, despite knowing the hazards associated with the normal use of those products, in order to continue profiting from use of those products by externalizing those known costs onto people, the environment, and communities, including residents of Delaware; and failing to warn the public about the hazards associated with the use of fossil fuel products.

258. Because of their superior knowledge of fossil fuel products, and their position controlling the extraction, refining, development, marketing, and sale of fossil fuel products, Fossil Fuel Defendants were in the best position to prevent the nuisance, but failed to do so, including by failing to warn customers, retailers, regulators, public officials, or the State of the risks posed by their fossil fuel

products, and failing to take any other precautionary measures to prevent or mitigate those known harms.

259. The public nuisance caused, contributed to, maintained, and/or participated in by Fossil Fuel Defendants has caused and/or imminently threatens to cause special injury to the State. The State has suffered unique harms of a kind that are different from Delaware citizens at large, namely, that the State has been harmed in its proprietary interests. The public nuisance has caused and/or imminently threatens to cause substantial injury to real and personal property directly owned by the State for the cultural, historic, and economic benefit of the Delaware's residents, and for their health, safety, and general welfare.

260. Fossil Fuel Defendants' actions were, at the least, a substantial contributing factor in the unreasonable violation of public rights enjoyed by the State and its residents as set forth above, because Fossil Fuel Defendants knew or should have known that their conduct would create a continuing problem with long-lasting significant negative effects on the rights of the public, and absent Fossil Fuel Defendants' conduct the violations of public rights described herein would not have occurred, or would have been less severe.

261. Fossil Fuel Defendants controlled the instrumentality of the nuisance at the time of the nuisance by flooding the marketplace with disinformation concerning

their products, and by controlling every step of the fossil fuel product supply chain from extraction, to marketing, to consumer sales.

262. Fossil Fuel Defendants' wrongful conduct as set forth herein exhibited a wanton or willful disregard for the rights of the State, and was committed with actual malice. Fossil Fuel Defendants had actual knowledge that their products were defective and dangerous and were and are causing and contributing to the nuisance complained of, and acted with conscious disregard for the probable dangerous consequences of their conduct's and products' foreseeable impact upon the rights of others, including Delaware and its residents. Therefore, the State requests an award of punitive damages in an amount reasonable, appropriate, and sufficient to punish these Fossil Fuel Defendants for the good of society and deter Fossil Fuel Defendants from ever committing the same or similar acts.

263. The State seeks an order that provides for abatement of the public nuisance Fossil Fuel Defendants have created, enjoins Fossil Fuel Defendants from creating future common-law nuisances, and awards the State damages in an amount to be determined at trial. The State pursues these remedies in its sovereign capacity for the benefit of the general public.

FOURTH CAUSE OF ACTION
(Delaware Consumer Fraud Act)
(Against American Petroleum Institute, BP America Inc., BP plc, Chevron Corporation, Chevron U.S.A. Inc., Exxon Mobil Corporation, ExxonMobil Oil Corporation, XTO Energy, Inc., Hess Corporation, Royal Dutch Shell PLC, Shell Oil Company, Citgo Petroleum Corporation, CNX Resources Corporation, Marathon Oil Company, Marathon Petroleum Corporation, Marathon Oil Corporation, Marathon Petroleum Company LP, and Speedway LLC)

264. The State realleges each and every allegation contained above, as though set forth herein in full.

265. In marketing and selling fossil fuel products, American Petroleum Institute, BP America Inc., BP plc, Chevron Corporation, Chevron U.S.A. Inc., Exxon Mobil Corporation, ExxonMobil Oil Corporation, XTO Energy, Inc., Hess Corporation, Royal Dutch Shell PLC, Shell Oil Company, Citgo Petroleum Corporation, CNX Resources Corporation, Marathon Oil Company, Marathon Petroleum Corporation, Marathon Oil Corporation, Marathon Petroleum Company LP, and Speedway LLC ("CFA Defendants") have persistently misrepresented material facts, or suppressed, concealed, or omitted material facts, with the intent that consumers will rely thereon.

266. CFA Defendants have marketed fossil fuels through misstatements and omissions of material facts regarding: (i) the reasonably foreseeable or knowable severe risks posed by their fossil fuel products; (ii) the purported environmental benefits of their fossil fuel products; (iii) the actions they have taken to reduce their

carbon footprint, invest in more renewables, or lower their fossil fuel production; and/or (iv) their purportedly diversified energy portfolio with meaningful renewable and low-carbon fuel components.

267. CFA Defendants have misrepresented material facts, or used concealment, suppression, or omission of material facts with the intent that others rely upon such concealment, suppression, or omission, in connection with the advertisement and sale of fossil fuels, whether or not any person has been misled, deceived, or damaged thereby, in violation of Section 2513(a) of the Delaware Consumer Fraud Act, 6 *Del. C.* § 2511, *et seq.*, by misrepresenting, suppressing, concealing, or omitting the material facts set forth in the preceding paragraph.

268. Based on information passed to them from their internal research divisions and affiliates, trade associations and industry groups, and/or from the international scientific community, CFA Defendants knew of or recklessly disregarded the climate effects inherently caused by the normal use and operation of their fossil fuel products, including the likelihood and likely severity of global warming, global and local sea level rise, more frequent and extreme drought, more frequent and extreme precipitation events, increased frequency and severity of heat waves and extreme temperatures, and the associated consequences of those physical and environmental changes, including the harms and injuries described herein by the State. CFA Defendants had a duty to disclose this information to Delaware

consumers in order to prevent their advertising and marketing statements from being misleading, and their failure to do so constituted a misrepresentation and/or omission in violation of the CFA.

269. Based on information passed to them from their internal research divisions and affiliates, trade associations and industry groups, and/or from the international scientific community, CFA Defendants knew or recklessly disregarded the fact that the climatic effects described herein rendered their fossil fuel products dangerous, or likely to be dangerous, when used as intended or in a reasonably foreseeable manner. CFA Defendants had a duty to disclose this information to Delaware consumers in order to prevent their advertising and marketing statements from being misleading, and their failure to do so constituted a misrepresentation and/or omission in violation of the CFA.

270. Throughout the times at issue, CFA Defendants individually and in concert, in and outside of Delaware, widely disseminated marketing materials, refuted the scientific knowledge generally accepted at the time, advanced and promoted pseudo-scientific theories of their own, and developed public relations materials that prevented reasonable consumers, including those in Delaware, from recognizing or discovering the latent risk that CFA Defendants' fossil fuel products would cause grave climate changes. In addition, CFA Defendants deceitfully represented themselves as leaders in renewable energy and made misleading claims

that their businesses were substantially invested in lower carbon technologies and renewable energy sources. These practices had a tendency to deceive consumers and the public, including the State and Delaware residents.

271. In advertising and selling their fossil fuel products, CFA Defendants misrepresented material facts to Delaware consumers about the environmental impacts of their products, including through CFA Defendants' misleading "greenwashing" advertisements, as outlined in Parts IV(F) and IV(G) of this Complaint. CFA Defendants' misrepresentations in advertising and selling their fossil fuel products occurred in Delaware and elsewhere.

272. CFA Defendants omitted, suppressed, or concealed from Delaware consumers their knowledge of the material fact that the use of their fossil fuel products contributes to climate change. CFA Defendants intended for consumers, including those in Delaware, to rely on these omissions to continue purchasing and using CFA Defendants' fossil fuel products without altering their behavior. CFA Defendants' omissions occurred in Delaware and elsewhere.

273. As a direct and proximate result of CFA Defendants' acts and omissions—i.e., marketing and selling fossil fuels and promoting their unchecked use while concealing and misrepresenting their dangers—the State of Delaware and Delaware consumers have sustained and will sustain substantial expenses and damages set forth in this Complaint and to be proven at trial, including damage to

publicly owned infrastructure and real property, and injuries to public resources that interfere with the rights of the State and its residents. These injuries have occurred as the direct and natural consequence of Delaware consumers' and other consumers' reliance upon CFA Defendants' misleading statements and omissions to continue purchasing and using fossil fuel products.

274. Each instance in which the CFA Defendants have advertised or sold fossil fuel products and either misrepresented material facts or suppressed, concealed, or omitted material facts related to the harms caused by the intended use of these products was with the intent that consumers, including those in Delaware, would rely upon such suppressions, concealments, or omissions, and constitutes a violation of Section 2513(a) of the Delaware Consumer Fraud Act.

275. Neither the State nor Delaware consumers were on notice of CFA Defendants' misrepresentations and omissions until recently. CFA Defendants, including Exxon, have made misleading statements to the public, including Delaware consumers, since at least 1977 and continuing through today, minimizing and contradicting the scientific consensus that use of fossil fuels directly contributes to climate change, while CFA Defendants' contemporaneous internal communications and studies demonstrated their knowledge of this scientific

consensus.[240] Thus, although CFA Defendants were on notice that they were making misrepresentations and omissions to the public, Delaware consumers were not.

276. For decades, CFA Defendants have engaged in a campaign of deception to hide their knowledge of the harmful effects of the intended use of their fossil fuel products on climate change, as alleged in Parts V(C)–(H) of this Complaint. The State and Delaware consumers were not merely ignorant of CFA Defendants' wrongful acts over the past several decades; rather, CFA Defendants affirmatively concealed their fraud by issuing misleading advertorials and other statements diminishing the harmful effects of their products' use on climate change without disclosing their own knowledge to the contrary—conduct that continues to this day. Neither the State nor its consumers were on inquiry or actual notice to investigate the CFA Defendants' campaign of deception until recently, nor should a reasonable person have been, because CFA Defendants' campaign of deception was so effective at concealing their lies from the public. As alleged in Part V(I) of this Complaint, CFA Defendants' deceit only recently became discoverable, and is continuing.

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[240] *See generally* Geoffrey Supran & Naomi Oreskes, *Assessing ExxonMobil's climate change communications (1977–2014)*, ENVIRON. RES. LETT. 12 (2017), https://iopscience.iop.org/article/10.1088/1748-9326/aa815f/pdf (finding that ExxonMobil's climate change communications, including its paid advertorials, from 1977 to 2014, "misled the public" and sowed doubt about climate change).

277. CFA Defendants fraudulently concealed their unlawful acts and omissions from the State, Delaware consumers, and the general public through their affirmative acts of implementing a campaign of deception about the harms posed by their fossil fuel products. CFA Defendants intentionally and deliberately acted to misled the State, Delaware consumers, and the public at large about the true impact of their products' use on climate change, and continue to do so today. CFA Defendants intended to induce consumers to rely on their misrepresentations and concealment of material facts about their products' contribution to climate change in order to continue purchasing and using CFA Defendants' fossil fuel products. Through CFA Defendants' misleading public statements in the media and funding of climate disinformation and denial campaigns, they intended to prevent the State and its consumers from gaining knowledge of the facts that the intended use of their products posed grave dangers to Delaware. CFA Defendants intended to mislead the public, consumers, and the State through this campaign of deception to prevent them from uncovering the truth. Because of this fraudulent concealment, the State and Delaware consumers could not have known with reasonable diligence that CFA Defendants were engaging in deceptive practices to conceal and mislead the public about the harmful effects of the use of their fossil fuel products.

278. CFA Defendants' continuing material misrepresentations and omissions, including greenwashing advertisements and public statements denying

the scientific consensus that use of fossil fuel products directly causes climate change, are not time-barred by the Consumer Fraud Act's five-year statute of limitations for actions brought by the Attorney General.

279. CFA Defendants' wrongful conduct as set forth herein was gross, oppressive, aggravated, exhibited a wanton or willful disregard for the rights of the State, and was committed with actual malice and involved the breach of the public's trust and confidence. CFA Defendants had actual knowledge that their products were and are causing and contributing to the injuries complained of, and acted with conscious disregard for the probable dangerous consequences of their conduct's and products' foreseeable impact upon the rights of others, including the State and Delaware residents, motivated primarily by unreasonable financial gain. Therefore, the State requests an award of punitive damages in an amount reasonable, appropriate, and sufficient to punish CFA Defendants for the good of society and deter CFA Defendants from ever committing the same or similar acts.

280. Wherefore, the State prays for relief as set forth below.

VI. PRAYER FOR RELIEF

The **STATE OF DELAWARE** seeks judgment against these Defendants for:

1. Compensatory damages, jointly and severally, in an amount according to proof;

2. Penalties against CFA Defendants, jointly and severally, in the amount of $10,000 for each instance in which CFA Defendants willfully violated the Delaware Consumer Fraud Act;

3. Reasonable attorneys' fees as permitted by law;

4. Punitive damages;

5. Costs of suit; and

6. For such and other relief as the Court may deem proper.

VII. REQUEST FOR JURY TRIAL

Delaware respectfully requests that all issues presented by its above Complaint be tried by a jury, with the exception of those issues that, by law, must be tried before the Court.

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