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EXEMPT FROM FILING FEES
UNDER GOV. CODE SEC. 6103

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF SAN FRANCISCO

COORDINATION PROCEEDING SPECIAL TITLE (RULE 3.550)

FUEL INDUSTRY CLIMATE CASES

This Document Relates To:

The People of the State of California ex rel. Rob Bonta, Attorney General of California v. Exxon Mobil Corporation et al., San Francisco Superior Court, Case No. CGC-23-609134

THE PEOPLE OF THE STATE OF CALIFORNIA ex rel. ROB BONTA, ATTORNEY GENERAL OF CALIFORNIA,

Plaintiff,

v.

EXXON MOBIL CORPORATION; EXXONMOBIL OIL CORPORATION; SHELL PLC; SHELL USA, INC.; SHELL

Case No. CJC-24-005310

JUDICIAL COUNCIL COORDINATION PROCEEDING No. 5310

FIRST AMENDED COMPLAINT FOR ABATEMENT, EQUITABLE RELIEF, PENALTIES, DISGORGEMENT, AND DAMAGES

JURY TRIAL DEMANDED

(1) PUBLIC NUISANCE;
(2) GOVERNMENT CODE SECTION 12607;
(3) UNTRUE OR MISLEADING ADVERTISING;
(4) MISLEADING ENVIRONMENTAL MARKETING;
(5) UNLAWFUL, UNFAIR, OR FRAUDULENT BUSINESS PRACTICES;
(6) STRICT PRODUCTS LIABILITY – FAILURE TO WARN; AND

OIL PRODUCTS COMPANY LLC; CHEVRON CORPORATION; CHEVRON U.S.A. INC.; CONOCOPHILLIPS; CONOCOPHILLIPS COMPANY; PHILLIPS 66; PHILLIPS 66 COMPANY; BP P.L.C.; BP AMERICA INC.; AMERICAN PETROLEUM INSTITUTE; AND DOES 1 THROUGH 100, INCLUSIVE,

Defendants.

(7) NEGLIGENT PRODUCTS LIABILITY – FAILURE TO WARN

TABLE OF CONTENTS

TABLE OF CONTENTS
(continued)

Page

The People of the State of California, by and through Rob Bonta, the Attorney General of California, allege as follows:

I. INTRODUCTION

1. In 2023 alone, the State of California has endured both extreme drought and widespread flooding, sprawling wildfires and historic storms, and an unusually cold spring and a record-hot summer. These extremes are devastating the State and destroying people's lives and livelihoods, and they are accelerating. These extremes are the products of climate change, and climate change is the product of widespread combustion of fossil fuels. Oil and gas company executives have known for decades that reliance on fossil fuels would cause these catastrophic results, but they suppressed that information from the public and policymakers by actively pushing out disinformation on the topic. Their deception was rewarded with tremendous revenues and profits, while causing a delayed societal response to global warming. And their deception continues to this day, with these companies now misleadingly promoting their businesses as responsible environmental citizens focused on offering solutions to climate change. The companies' misconduct has resulted in tremendous costs to people, property, and natural resources, which continue to unfold each day. Californians and their families, communities, and small businesses should not have to bear all the costs of climate change alone; the companies that have polluted our air, choked our skies with smoke, wreaked havoc on our water cycle, and contaminated our lands must be made to mitigate the harms they have brought upon the State. This lawsuit seeks to hold those companies accountable for the lies they have told and the damage they have caused.

2. The People of the State of California (State)[1] bring this action against Defendants Exxon Mobil Corporation; ExxonMobil Oil Corporation; Shell plc; Shell USA, Inc.; Shell Oil Products Company LLC; Chevron Corporation; Chevron U.S.A. Inc.; ConocoPhillips; ConocoPhillips Company; Phillips 66; Phillips 66 Company; BP p.l.c.; BP America Inc.;

[1] In this Complaint, the term "State" refers to the State of California, unless otherwise stated. The term "California" refers to the area falling within the State's geographic boundaries, unless otherwise stated. The State expressly disclaims injuries arising on federal land and tribal lands held in trust by the United States and does not seek recovery or relief attributable to these injuries.

American Petroleum Institute, and Does 1 through 100 (collectively, Defendants) for creating, contributing to, and/or assisting in the creation of state-wide climate change-related harms in California. As more fully alleged below, Defendants created, contributed to, and/or assisted in the creation of a public nuisance, and harmed or destroyed natural resources.

3. Defendants are large companies in the fossil fuel industry who have misled consumers and the public about climate change for decades. Defendants have known since at least the 1960s that fossil fuels produce carbon dioxide and other greenhouse gas (GHG) pollution that would warm the planet and change our climate. Defendants' own scientists knew as early as the 1950s that these climate impacts would be catastrophic, and that there was only a narrow window of time in which communities and governments could take action before the consequences became catastrophic.

4. Rather than warn consumers, the public, and governments, however, Defendants mounted a disinformation campaign beginning at least as early as the 1970s to discredit the burgeoning scientific consensus on climate change; deny their own knowledge of climate change-related threats; create doubt in the minds of consumers, the media, teachers, policymakers, and the public about the reality and consequences of the impacts of burning fossil fuels; and delay the necessary transition to a lower-carbon future.

5. Defendants' climate deception campaign, and aggressive promotion of the use of fossil fuel products while knowing the dangers associated with them, had the purpose and effect of unduly and substantially inflating and sustaining the market for fossil fuels, and therefore the Fossil Fuel Defendants' profits, while misrepresenting and concealing the hazards of those products to deceive consumers and the public about the consequences of everyday use of fossil fuel products. Defendants' tortious and deceptive conduct caused an enormous, foreseeable, and avoidable increase in anthropogenic GHG emissions and accelerated global warming, bringing devastating consequences to the State and its people. While Defendants have promoted and/or profited from the extraction and consumption of fossil fuels, the State and its residents have spent, and will continue to spend, billions of dollars to recover from climate change-induced superstorms and wildfires; will have to allocate and manage dwindling water supplies in extreme

drought; will have to fortify state infrastructure against sea level rise and coastal and inland flooding; and will have to protect California's people, infrastructure, and natural resources from extreme heat and many other climate change hazards.

6. Defendants' deceptive and tortious conduct was a substantial factor in bringing about these devastating climate change impacts in California, including, but not limited to, extreme heat, more frequent and intense droughts, increasingly severe wildfires, more frequent and intense storms and associated flooding, degradation of air and water quality, damage to agriculture, sea level rise, and habitat and species loss. As a direct result of Defendants' egregious misconduct, the State has incurred significant climate change harms, and will continue to incur such harms into the future. The associated consequences of these physical and environmental changes are felt throughout every part of the State, across all ecosystems and communities, and can be compounded in frontline communities, which often disproportionately bear the burden of climate impacts.[2]

7. Defendants' individual and collective conduct was a substantial factor in bringing about the State's climate-related injuries. Defendants' knowing concealment and misrepresentation of fossil fuels' dangers—together with the affirmative promotion of unrestrained fossil fuel use—drove fossil fuel consumption and delayed the transition to a lower-carbon future, resulting in greater greenhouse gas pollution, accelerated global warming, and more dire impacts from the climate crisis in California and elsewhere.

8. The scale of the devastating public nuisance created by Defendants' egregious misconduct is truly staggering, and California will be dealing with the consequences of this misconduct for many generations. The State respectfully requests that this Court order Defendants to abate the massive public nuisance they created, contributed to, and/or assisted in the creation of, and that this Court use its equitable powers to order Defendants to mitigate future harm to the environment and people of California attributable to Defendants' unlawful actions, including, but not limited to, by granting preliminary and permanent equitable relief. The State further

[2] "Frontline communities" are those that are and will continue to be disproportionately impacted by climate change. In many cases, the most harmed are the same communities that have historically experienced racial, social, health, and economic inequities.

respectfully requests that this Court order Defendants to pay damages, statutory penalties, restitution, and disgorgement.

II. PARTIES

A. Plaintiff

9. Plaintiff is the People of the State of California. This civil enforcement action is prosecuted on behalf of the People by and through Rob Bonta, Attorney General of California, under the Attorney General's broad independent powers to enforce state laws (Cal. Const., art. V, § 13), and pursuant to Government Code sections 12527.6 and 12600 et seq.; Civil Code sections 3479, 3480, 3491, and 3494; Business and Professions Code sections 17203, 17204, 17206, 17535, and 17536; and Code of Civil Procedure sections 731 and 1021.8.

B. Defendants

10. Defendants include some of the largest oil and gas companies in the world, and a national oil and gas industry trade association. The fossil fuels produced by the defendant companies (and promoted by the defendant trade association) are individually and collectively responsible for the emission of billions of tons of greenhouse gases.

11. When this Complaint references an act or omission of Defendants, unless specifically attributed or otherwise stated, such references 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.

12. **Exxon Entities: Exxon Mobil Corporation; ExxonMobil Oil Corporation**

a. Defendant Exxon Mobil Corporation is a New Jersey corporation headquartered in Spring, Texas, and has been registered to do business in California since 1972. Exxon Mobil Corporation is a multinational, vertically integrated energy and chemical company and one of 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 Exxon Corporation; 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.; Standard Oil Company of New Jersey; and Mobil Corporation.

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 a New York corporation headquartered in Spring, Texas, and has been registered to do business in California since 1959. ExxonMobil Oil Corporation was formerly known as, did or does business as, and/or is the successor in liability to Mobil Oil Corporation. ExxonMobil Oil Corporation is engaged in the business of oil and natural gas production, refining, marketing, and distribution.

c. Exxon Mobil Corporation controls and has controlled company-wide decisions about the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. Exxon Mobil Corporation's 2022 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 shareholders, depends on [its] ability to successfully manage [its] overall portfolio, including diversification among types and locations of [its] projects, products produced, and strategies to divest assets." Exxon Mobil Corporation determines whether and to what extent its subsidiaries market, produce, and/or distribute fossil fuel products.

d. Exxon Mobil Corporation controls and has controlled company-wide decisions, including those of its subsidiaries, related to marketing, advertising, GHG emissions and climate change resulting from the company's fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and humans. 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 have been actively engaged in discussions relating to GHG emissions and the risks of climate change on an ongoing basis. Exxon Mobil Corporation requires its

subsidiaries, when seeking funding for capital investments, to provide estimates of project costs related to GHG emissions.

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

f. The State's claims against Exxon arise out of and are related to the acts and omissions of Exxon in California and elsewhere that caused and will cause injuries in California.

g. 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.

h. Exxon has purposefully directed its tortious conduct toward California by distributing, marketing, advertising, promoting, and supplying its fossil fuel products in California, with knowledge that the intended use of those products for combustion has caused and will continue to cause climate change-related harms in California, including the State's injuries. Exxon's statements in California and elsewhere made in furtherance of its campaign of deception about and denial of climate change, and Exxon's affirmative promotion of its fossil fuel products as safe with knowledge of how the intended use of those products would cause climate change-related harms, were designed to conceal and mislead consumers and the public, including the State and its residents, about the serious adverse consequences that would result from continued use of Exxon's products. That conduct was purposefully directed to reach and influence the State and its residents to continue unabated use of Exxon's fossil fuel products in California, thereby resulting in the State's injuries.

i. Over the past several decades and continuing to the present day, Exxon spent millions of dollars on radio, television, online, social media, and outdoor advertisements in the California market related to its fossil fuel products. Since at least 1972, and continuing to the present day, Exxon has advertised its fossil fuel products in print publications circulated widely to

California consumers, including but not limited to: *The Atlantic*, *Life*, *National Geographic*, *The New York Times*, *People*, *Sports Illustrated*, *Time*, *The Wall Street Journal*, and *The Washington Post*. Exxon has also run advertisements in California media outlets, including but not limited to the following: CBS 5 San Francisco, KRLA-AM, *The Sacramento Bee*, *San Francisco Examiner*, *The Santa Rosa Press Democrat*, *SFGate.com*, and *Sonoma Magazine*. As further detailed herein, these include advertisements containing false or misleading statements, misrepresentations, and/or material omissions designed to hide the connection between the production and use of Exxon's fossil fuel products and climate change, and/or misrepresenting Exxon's products or Exxon itself as environmentally friendly.

j. Significant quantities of Exxon's fossil fuel products are or have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in California, from which activities Exxon derives and has derived substantial revenue. Exxon owns and operates a petroleum storage and transport facility in the San Ardo Oil Field in San Ardo, California. Exxon and its predecessors owned and operated an oil refinery in Torrance, California from 1966 to 2016, shortly after an explosion disabled the refinery. Exxon Co. USA, an ExxonMobil subsidiary, operated a petroleum refinery in Benicia, California, from 1968 to 2000. Exxon also—both directly and through its subsidiaries and/or predecessors-in-interest—has supplied substantial quantities of fossil fuel products to California during the period relevant to this Complaint. Currently, Exxon promotes, markets, and sells gasoline and other fossil fuel products to California consumers through approximately 600 Exxon- and Mobil-branded petroleum service stations in California. During the period relevant to this Complaint, Exxon sold a substantial percentage of all retail gasoline in California. Exxon also markets and sells petroleum products, including engine lubricants and motor oils sold under the "Mobil 1" brand name, to California customers through local retailers.

k. Exxon historically directed its fossil fuel product advertising, marketing, and promotional campaigns to California residents, including through maps that identify the locations of its service stations in California. To this day, Exxon continues to market and advertise its fossil fuel products in California to California residents by maintaining an interactive website available

to prospective customers that directs California residents to Exxon's nearby retail service stations and lubricant distributors. Further, Exxon promotes its products in California by regularly updating and actively promoting its mobile device application, "Exxon Mobil Rewards+," throughout the State of California, which encourages California users to consume fuel at Exxon stations in California in exchange for rewards on every fuel purchase.

13. **Shell Entities: Shell plc; Shell USA, Inc.; Shell Oil Products Company LLC**

a. Defendant Shell plc (formerly Royal Dutch Shell PLC) is a vertically integrated multinational energy and petrochemical company. Shell plc is incorporated in England and Wales, with its headquarters and principal place of business in The Hague, Netherlands. Shell plc is the ultimate parent company of numerous divisions, subsidiaries, and affiliates, referred to collectively as the "Shell Group," that engage in all aspects of fossil fuel production, including exploration, development, extraction, manufacturing and energy production, transport, trading, marketing, and sales.

b. Shell plc controls and has controlled company-wide decisions about the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. Shell plc's Board of Directors determines whether and to what extent Shell subsidiary holdings around the globe produce Shell-branded fossil fuel products.

c. Shell plc controls and has controlled company-wide decisions, including those of its subsidiaries, related to marketing, advertising, GHG emissions and climate change resulting from the company's fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and humans. Overall accountability for climate change within the Shell Group lies with Shell plc's Chief Executive Officer and Executive Committee. For instance, at least as early as 1988, Shell plc, through its predecessors and subsidiaries, was researching company-wide CO_2 emissions and concluded that the Shell Group accounted for 4% of the CO_2 emitted worldwide from combustion, and that climatic changes could compel the Shell Group, as controlled by Shell plc, to examine the possibilities of expanding and contracting its business accordingly.

d. Defendant Shell USA, Inc. (formerly Shell Oil Company) is a wholly owned subsidiary of Shell plc that acts on Shell plc's behalf and is subject to Shell plc's control. Shell USA, Inc. is incorporated in Delaware, with its principal place of business in Houston, Texas. Shell USA, Inc. has been registered to do business in California since 1949. Shell USA, Inc. was formerly known as, did or does business as, and/or is the successor in liability to Shell Oil Company; Shell Oil; Deer Park Refining LP; Shell Oil Products US; Shell Chemical LP; Shell Trading (US) Company; Shell Energy Resources Company; Shell Energy Services Company, L.L.C.; The Pennzoil Company; and Pennzoil-Quaker State Company.

e. Defendant Shell Oil Products Company LLC is a wholly owned subsidiary of Shell USA, Inc., that acts on Shell USA, Inc.'s behalf and is subject to Shell USA, Inc.'s control. Shell Oil Products Company LLC is incorporated in Delaware, with its principal place of business in Houston, Texas, and has been registered to do business in California since 2001. Shell Oil Products Company LLC was formerly known as, did or does business as, and/or is the successor in liability to Shell Oil Products Company, which was a Delaware corporation that converted to a limited liability company in 2001.

f. Defendants Shell plc, Shell USA, Inc., Shell Oil Products Company LLC, and their predecessors, successors, parents, subsidiaries, affiliates, and divisions are collectively referred to herein as "Shell."

g. The State's claims against Shell arise out of and are related to the acts and omissions of Shell in California and elsewhere that caused and will cause injuries in California.

h. Shell has purposefully directed its tortious conduct toward California by distributing, marketing, advertising, promoting, and supplying its fossil fuel products in California, with knowledge that the intended use of those products for combustion has caused and will continue to cause climate change-related harms in California, including the State's injuries. Shell's statements in California and elsewhere made in furtherance of its campaign of deception about and denial of climate change, and Shell's affirmative promotion of its fossil fuel products as safe with knowledge of how the intended use of those products would cause climate change-related harms, were designed to conceal these harms and mislead consumers and the public,

including the State and its residents, about the serious adverse consequences that would result from continued use of Shell's products. That conduct was purposefully directed to reach and influence the State and its residents, to continue unabated use of Shell's fossil fuel products in California, thereby resulting in the State's injuries.

i. Over the last several decades and continuing to the present day, Shell spent millions of dollars on radio, television, online, social media, and outdoor advertisements in the California market related to its fossil fuel products. Since at least 1970, and continuing to the present day, Shell has advertised its fossil fuel products in print publications circulated widely to California consumers, including but not limited to the following: *The Atlantic*, *The Economist*, *Life*, *National Geographic*, *Newsweek*, *The New York Times*, *Sports Illustrated*, *Time Magazine*, *The Wall Street Journal*, and *The Washington Post*. Shell has also run advertisements in California media outlets, including but not limited to the following: NBC 11 Bay Area, *The San Bernardino Sun*, *The Santa Rosa Press Democrat*, and *Whittier Daily News*. As further detailed herein, these include advertisements containing false or misleading statements, misrepresentations, and/or material omissions obfuscating the connection between the production and use of Shell's fossil fuel products and climate change, and/or misrepresenting Shell's products or Shell itself as environmentally friendly.

j. Significant quantities of Shell's fossil fuel products are or have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in California, from which activities Shell derives and has derived substantial revenue. Shell conducts and controls, either directly or through franchise agreements, retail fossil fuel sales at gas station locations throughout California, at which locations it promotes, advertises, and sells its fossil fuel products under its Shell brand name. Shell operates over 1,000 Shell-branded petroleum service stations in California. During the period relevant to this Complaint, Shell sold a substantial percentage of all retail gasoline sold in California. Shell also supplies, markets, and promotes its Pennzoil line of lubricants at retail and service stations throughout California. From 1924 to 1992, Shell owned and operated an oil refinery in Carson, California, where it now owns and operates the property as a distribution facility for petroleum and petroleum products

throughout Southern California. From 1915 to 2020, Shell owned and operated an oil refinery in Martinez, California. From 1998-2007, Shell owned and operated an oil refinery in Wilmington, California. From 1998 to 2005, Shell owned and operated an oil refinery in Bakersfield, California.

k. Shell historically directed its fossil fuel product advertising, marketing, and promotional campaigns to California, including through maps that identified the locations of its service stations in California. Shell markets and advertises its fossil fuel products in California to California residents by maintaining an interactive website available to prospective customers by which it directs California 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 California 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 California consumers a cashless payment method for gasoline and other products at Shell-branded service stations. California consumers utilize the payment method by providing their credit card information through the application. California 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.

14. **Chevron Entities: Chevron Corporation; Chevron U.S.A. 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. Chevron Corporation, through its predecessor Standard Oil Company of California, has been registered to do business in California since 1926. Chevron Corporation was formerly known as, did or does business as, and/or is the successor in liability to Standard Oil Company of California (also known as "Socal"), Texaco Inc., and ChevronTexaco Corporation.

b. Chevron Corporation operates through a web of United States and international subsidiaries at all levels of the fossil fuel supply chain. Chevron Corporation and its subsidiaries' operations include, but are not limited to: exploration, development, production, storage, transportation, and marketing of crude oil and natural gas; refining crude oil into petroleum products and marketing those products; and manufacturing and marketing commodity petrochemicals, plastics for industrial uses, and fuel and lubricant additives.

c. Chevron Corporation controls and has controlled company-wide 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 corporate holdings market, produce, and/or distribute fossil fuel products.

d. Chevron Corporation controls and has controlled company-wide decisions, including those of its subsidiaries, related to marketing, advertising, GHG emissions and climate change resulting from the company's fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and humans. Overall accountability for climate change within Chevron Corporation lies with Chevron Corporation's Board of Directors and Executive Committee.

e. Defendant Chevron U.S.A. Inc. is a wholly owned subsidiary of Chevron Corporation that acts on Chevron Corporation's behalf and is subject to Chevron Corporation's control. Chevron U.S.A. Inc. is a Pennsylvania corporation, with its principal place of business in San Ramon, California. Through its predecessors, Chevron U.S.A. Inc. has been registered to do business in California since 1965. Chevron U.S.A. Inc. was formerly known as, 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, and Chevron Chemical Company LLC.

f. Defendants Chevron Corporation and Chevron U.S.A. Inc., together with their predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as "Chevron."

g. The State's claims against Chevron arise out of and are related to the acts and omissions of Chevron in California and elsewhere that caused and will cause injuries in California.

h. Chevron has purposefully directed its tortious conduct toward California by distributing, marketing, advertising, promoting, and supplying its fossil fuel products in California, with knowledge that the intended use of those products for combustion has caused and will continue to cause climate change-related harms in California, including the State's injuries. Chevron's statements in California and elsewhere made in furtherance of its campaign of deception about and denial of climate change, and Chevron's affirmative promotion of its fossil fuel products as safe with knowledge of how the intended use of those products would cause climate change-related harms, were designed to conceal and mislead consumers and the public, including the State and its residents, about the serious adverse consequences that would result from continued use of Chevron's products. That conduct was purposefully directed to reach and influence the State and its residents to continue unabated use of Chevron's fossil fuel products in California, thereby resulting in the State's injuries.

i. Over the last several decades and continuing to the present day, Chevron spent millions of dollars on radio, television, online, social media, and outdoor advertisements in the California market related to its fossil fuel products. Since at least 1970, and continuing to the present day, Chevron has advertised in print publications circulated widely to California consumers, including but not limited to the following: *The Atlantic*, *Life*, *National Geographic*, *The New York Times*, *Sports Illustrated*, *Time Magazine*, *The Wall Street Journal*, and *The Washington Post*. Chevron has also run advertisements in California media outlets, including but not limited to the following: CBS 5 San Francisco, *East Bay Times*, *Los Angeles Times*, *San Francisco Business Times*, *San Francisco Examiner*, and *The Mercury News*. As further detailed herein, these include advertisements containing false or misleading statements, misrepresentations, and/or material omissions obfuscating the connection between the production and use of Chevron's fossil fuel products and climate change, and/or misrepresenting Chevron's products or Chevron itself as environmentally friendly.

j. Significant quantities of Chevron's fossil fuel products are or have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in California, from which activities Chevron derives and has derived substantial revenue. Chevron conducts and controls, either directly or through franchise agreements, retail fossil fuel sales at gas station locations throughout California, at which locations it promotes, advertises, and sells its fossil fuel products under its various brand names, including Chevron, Texaco, and other brand names. Chevron operates over 1,500 Chevron-branded petroleum service stations in California. Chevron has owned and operated an oil refinery in Richmond, California, since 1902, and has owned and operated an oil refinery in El Segundo, California, since 1911. During the period relevant to this Complaint, Chevron sold a substantial percentage of all retail gasoline sold in California.

k. Chevron historically directed its fossil fuel product advertising, marketing, and promotional campaigns to California, including through maps that identified the locations of its service stations in California. Chevron markets and advertises its fossil fuel products in California to California residents by maintaining an interactive website available to prospective customers by which it directs California residents to Chevron's nearby retail service stations. Chevron markets and sells engine lubricants and motor oils to California customers under its Delo, IsoClean, Techron, and Havoline brand names at retail outlets. Chevron offers a proprietary credit card known as the "Chevron Techron Advantage Credit Card," which allows consumers in California to pay for gasoline and other products at Chevron-branded service stations, and which encouraged California consumers to use Chevron-branded service stations by offering various rewards, including discounts on gasoline purchases at Chevron service stations and cash rebates. Chevron further maintains two smartphone applications known as the "Chevron App" and the "Texaco App," both part of the "Chevron Texaco Rewards" program. The program offers California consumers a cashless payment method for gasoline and other products at Chevron- and Texaco-branded service stations. California consumers utilize the payment method by providing their credit card information through the application. California consumers can also receive rewards, including discounts on gasoline purchases, by registering their personal identifying

information in the apps and by using the applications to identify and activate gas pumps at Chevron and Texaco service stations during a purchase.

15. **<u>ConocoPhillips Entities</u>: ConocoPhillips, ConocoPhillips Company, Phillips 66, Phillips 66 Company**

a. Defendant ConocoPhillips is a multinational energy company incorporated in Delaware, with its principal place of business in Houston, Texas. ConocoPhillips consists of numerous divisions, subsidiaries, and affiliates that execute ConocoPhillips's fundamental decisions related to all aspects of fossil fuel production, including exploration, extraction, production, manufacture, transport, and marketing.

b. ConocoPhillips controls and has controlled company-wide 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 corporate holdings market, produce, and/or distribute fossil fuel products. ConocoPhillips's most recent annual report to the Securities and Exchange Commission subsumes the operations of ConocoPhillips's subsidiaries. In ConocoPhillips's Form 10-K filed with the Securities and Exchange Commission for Fiscal Year 2022, the company represents that its value—for which ConocoPhillips maintains ultimate responsibility—is a function of its decisions to direct subsidiaries to develop crude oil, bitumen, natural gas, and natural gas liquids from ConocoPhillips's reserves into fossil fuel products and to explore for and replace those reserves with more fossil fuels: "Unless we successfully develop resources, the scope of our business will decline, resulting in an adverse impact to our business. . . . If we are not successful in replacing the resources we produce with good prospects for future organic development or through acquisitions, our business will decline." 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 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 company-wide decisions, including those of its subsidiaries, related to marketing, advertising, GHG emissions and climate change resulting from the company's fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and humans. For instance, ConocoPhillips's Board of Directors has the highest level of direct responsibility for climate change policy within the company. ConocoPhillips has developed and purportedly 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 is subject to ConocoPhillips's control. ConocoPhillips Company is incorporated in Delaware, with its principal place of business in Houston, Texas, and has been registered to do business in California since 1947. ConocoPhillips Company was formerly known as, did or does business as, and/or is the successor in liability to Phillips Petroleum Company.

e. Defendant Phillips 66 is a multinational energy and petrochemical company incorporated in Delaware, 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 is subject to Phillips 66's control. Phillips 66 Company is incorporated in Delaware, with its principal place of business in Houston, Texas, and has been registered to do business in California since 2011. Phillips 66 Company had been registered since 1964 under a different name, Phillips Chemical Company, which was a wholly owned subsidiary of the Phillips Petroleum Company. Phillips Chemical Company changed its name to Phillips 66 Company in 1985, and that iteration of Phillips 66 Company was terminated in 1991. Phillips 66 Company was formerly known as, did or does business as, and/or is the successor in liability to Phillips Petroleum Company; Phillips Chemical Company; Conoco, Inc.; Tosco Corporation; and Tosco Refining Co.

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

h. The State's claims against ConocoPhillips arise out of and are related to the acts and omissions of ConocoPhillips in California and elsewhere that caused and will cause injuries in California.

i. ConocoPhillips has purposefully directed its tortious conduct toward California by distributing, marketing, advertising, promoting, and supplying its fossil fuel products in California, with knowledge that the intended use of those products for combustion has caused and will continue to cause climate change-related harms in California, including the State's injuries. ConocoPhillips's statements in California and elsewhere made in furtherance of its campaign of deception about and denial of climate change, and ConocoPhillips's affirmative promotion of its fossil fuel products as safe with knowledge of how the intended use of those products would cause climate change-related harms, were designed to conceal and mislead consumers and the public, including the State and its residents, about the serious adverse consequences that would result from continued use of ConocoPhillips's products. That conduct was purposefully directed to reach and influence the State and its residents to continue unabated use of ConocoPhillips's fossil fuel products in California, thereby resulting in the State's injuries.

j. Over the last several decades and continuing to the present day, ConocoPhillips spent millions of dollars on radio, television, online, social media, and outdoor advertisements in the California market related to its fossil fuel products. Since at least 1970, and continuing to the present day, ConocoPhillips has advertised in print publications circulated widely to California consumers, including but not limited to the following: *The Atlantic*, *Life*, *National Geographic*, *Newsweek*, *The New York Times*, *People*, *Sports Illustrated*, *Time Magazine*, *The Wall Street Journal*, and *The Washington Post*. As further detailed herein, these include advertisements containing false or misleading statements, misrepresentations, and/or material omissions obfuscating the connection between the production and use of ConocoPhillips's fossil fuel

products and climate change, and/or misrepresenting ConocoPhillips's products or ConocoPhillips itself as environmentally friendly.

k. Significant quantities of ConocoPhillips's fossil fuel products are or have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in California, from which activities ConocoPhillips derives and has derived substantial revenue. ConocoPhillips conducts and controls, either directly or through franchise agreements, retail fossil fuel sales at gas station locations throughout California, at which locations it promotes, advertises, and sells its fossil fuel products under its various brand names, including Conoco, Phillips 66, and 76. ConocoPhillips also markets and sells to California customers at retail outlets engine lubricants and motor oils under its Phillips 66, Kendall, and Red Line brand names. ConocoPhillips operates hundreds of 76-branded petroleum service stations throughout California. During the period relevant to this Complaint, ConocoPhillips sold a substantial percentage of all retail gasoline sold in California.

l. ConocoPhillips does substantial fossil fuel product-related business in California, and a substantial quantity of its fossil fuel products are extracted, refined, transported, traded, distributed, marketed, and/or sold in California. For instance, ConocoPhillips owns and/or operates oil and natural gas terminals in Richmond and Los Angeles, California; owns and operates oil refineries in Arroyo Grande, Colton, and Wilmington, California; and distributes ConocoPhillips fossil fuel products throughout California. Phillips 66 also owns and operates oil refineries in Rodeo, Santa Maria, and Los Angeles, California. All of these refineries were owned and operated by ConocoPhillips and its predecessors-in-interest from 1997 to 2012.

m. ConocoPhillips has historically directed its fossil fuel product advertising, marketing, and promotional campaigns to California, including through maps identifying its services throughout California. ConocoPhillips markets and advertises its fossil fuel products in California to California residents by maintaining an interactive website available to prospective customers by which it directs California residents to ConocoPhillips's nearby retail service stations. ConocoPhillips offers a proprietary credit card known as the "76 Credit Card," which allows consumers in California to pay for gasoline and other products at 76-branded service

stations, and which encourages California consumers to use 76-branded service stations by offering various rewards, including discounts on gasoline purchases at 76-branded service stations and cash rebates. ConocoPhillips further maintains a nationwide smartphone application known as the "Fuel Forward App." The application offers California consumers a cashless payment method for gasoline and other products at 76-branded service stations. California consumers utilize the payment method by providing their credit card information through the application. California consumers can also apply for a 76 Credit Card through the application. By registering their personal identifying information in the application and by using the application to identify and activate gas pumps at 76-branded service stations, California consumers can receive additional rewards, such as further discounts on ConocoPhillips gasoline purchases.

16. **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 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, including Atlantic Richfield Company, referred to collectively herein 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 and other contractual agreements. BP p.l.c. was formerly known as, did or does business as, and/or is the successor in liability to British Petroleum Company, British Petroleum Company p.l.c., BP Amoco p.l.c., Amoco Corporation, and Atlantic Richfield Company.

b. BP p.l.c. controls and has controlled company-wide decisions about the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. BP p.l.c. is the ultimate decision-maker with respect to fundamental decisions about the BP Group's core business, e.g., the level of fossil fuel production companywide, including production among BP p.l.c.'s subsidiaries. For instance, BP p.l.c. reported that in 2016-17, it brought online 13 major

exploration and production projects. These contributed to a 12% 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. noted that it expected 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 company-wide decisions, including those of its subsidiaries, related to marketing, advertising, GHG emissions and climate change resulting from the company's fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and humans. 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 change-related matters and consists of two committees—both overseen directly by the Board of Directors—that focus on climate change-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 is 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, and has been registered to do business in California since 2000. BP America Inc. consists of numerous divisions and affiliates in all aspects of fossil fuel production, 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 Oil Company; Amoco Production Company; ARCO Products Company; BP Exploration & Oil, Inc.; BP Products North America Inc.; BP Amoco Corporation; BP Oil, Inc.; BP Oil Company; Sohio Oil Company; Standard Oil

of Ohio (SOHIO); Standard Oil (Indiana); and 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 and are related to the acts and omissions of BP in California and BP's actions elsewhere that caused and will cause injuries in California.

g. BP has purposefully directed its tortious conduct toward California by distributing, marketing, advertising, promoting, and supplying its fossil fuel products in California, with knowledge that the intended use of those products for combustion have caused and will continue to cause climate change-related harms in California, including the State's injuries. BP's statements in California and elsewhere made in furtherance of its campaign of deception about and denial of climate change, and BP's affirmative promotion of its fossil fuel products as safe with knowledge of how the intended use of those products would cause climate change-related harms, were designed to conceal and mislead consumers and the public, including the State and its residents, about the serious adverse consequences that would result from continued use of BP's products. That conduct was purposefully directed to reach and influence the State and its residents to continue unabated use of BP's fossil fuel products in California, thereby resulting in the State's injuries.

h. Over the last several decades and continuing to the present day, BP—especially BP p.l.c.—spent millions of dollars on radio, television, online, social media, and outdoor advertisements in the California market related to its fossil fuel products. Since at least 1988 and continuing to the present day, BP has advertised in print publications circulated widely to California consumers, including but not limited to the following: *The Atlantic*, *Life*, *Newsweek*, *The New York Times*, *Sports Illustrated*, *Time*, *The Wall Street Journal*, and *The Washington Post*. BP has also run advertisements in California media outlets, including but not limited to the following: ABC 7 San Francisco, *Inland Valley Daily Bulletin*, KBCW 44 San Francisco, *Los*

Angeles Times, *The Orange County Register*, *Pasadena Star News*, *Redlands Daily Facts*, *The San Bernardino Sun*, *The Mercury News*, *SFGate.com*, and *Whittier Daily News*. As further detailed herein, these include advertisements containing false or misleading statements, misrepresentations, and/or material omissions obfuscating the connection between the production and use of BP's fossil fuel products and climate change, and/or misrepresenting BP's products or BP itself as environmentally friendly.

i. Significant quantities of BP's fossil fuel products are or have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in California, from which activities BP derives and has derived substantial revenue. BP conducts and controls, either directly or through franchise agreements, retail fossil fuel sales at gas station locations in substantial portions of California, at which locations it promotes, advertises, and sells its fossil fuel products under its ARCO brand name. Among other operations, BP operates more than 300 ARCO-licensed and branded gas stations in California, and distributes and markets petroleum-based lubricants marketed under the Castrol brand name throughout California. From 2000 to 2013, BP also owned and operated an oil refinery in Carson, California. During the period relevant to this Complaint, BP sold a substantial percentage of all retail gasoline sold in California. BP's marketing and trading business maintains an office in Irvine, California. BP maintains an energy research center in San Diego, California.

j. BP historically directed its fossil fuel product advertising, marketing, and promotional campaigns to California, including through maps that identified the locations of its service stations in California. BP markets and advertises its fossil fuel products in California to California residents by maintaining an interactive website available to prospective customers by which it directs California residents to BP's nearby retail service stations and/or lubricant distributors.

17. The Exxon, Shell, Chevron, ConocoPhillips, and BP entities set forth above are collectively referred to as the "Fossil Fuel Defendants."

18. **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 California. API was created in 1919 to represent the American oil and gas 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 members' collective business interests, which includes increasing consumer consumption of oil and gas for the financial profit of the Fossil Fuel Defendants and other oil and gas companies. Among other functions, API also coordinates 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, since at least 1988, participated in and led several coalitions, front groups, and organizations that have promoted disinformation about the climate impacts of fossil fuel products to consumers—including, but not limited to, 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 promote climate disinformation and advocacy from a purportedly objective source, when in fact these groups were financed and controlled by the Fossil Fuel Defendants and other oil and gas companies. The 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 the Fossil Fuel Defendants.

c. API reports that in 2022 it made approximately $239 million in total revenue, including approximately $110 million from membership dues.

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

the California market. API has also run advertisements in California media outlets, including but not limited to the following: ABC 7 San Francisco, *The Coast News*, *East Bay Times*, *Inland Valley Daily Bulletin*, *The Orange County Register*, *Pasadena Star News*, *Press Telegram*, *Redlands Daily Facts*, *The Mercury News*, *SFGate.com*, *Time Out Los Angeles*, and *Whittier Daily News*.

e. Member companies participate in API strategy, governance, and operation through their membership dues and by contributing company officers and other personnel to API boards, committees, and task forces. The Fossil Fuel Defendants have collectively steered the policies and trade practices of API through membership, Executive Committee roles, and/or providing budgetary funding for API. The Fossil Fuel Defendants have used their control over and involvement in API to develop and execute a long-term advertising and communications campaign centered on climate change denialism. The goal of the campaign was to influence consumer demand for the Fossil Fuel Defendants' fossil fuel products. The Fossil Fuel Defendants directly controlled, supervised, and participated in API's misleading messaging regarding climate change.

f. In addition to national promotional campaigns circulated in California, API has also targeted California consumers directly by creating and disseminating misleading advertisements that distinctly promote consumption of fossil fuel products in California. API has run numerous press releases within California touting the direct and indirect benefits to California of the oil and gas industries' operations in California and elsewhere in the United States. The reports, sponsored by API, on which API bases its claims, do not mention climate change at all, nor do the reports mention any of the direct and indirect harms to California caused by the production, marketing, sale, and use of API members' fossil fuel products. Further, API's Department of Production sponsors two local API chapters in California, the Coastal Chapter and the San Joaquin Valley Chapter, which function "to promote a more cordial understanding by the public of the close economic relationship that exists between the petroleum industry and other lines of business." API also regularly hosts within California trade association events for oil and gas and related industries.

g. All of the Fossil Fuel Defendants and/or their predecessors-in-interest have been key API members at all times relevant to this Complaint. All of the Fossil Fuel Defendants are currently members of API. Executives from Exxon, Shell, Chevron, ConocoPhillips, and BP have served on the API Executive Committee and/or as API Chairman, essentially serving as corporate officers. For example, Exxon's CEO served on API's Executive Committee for 15 of the 25 years between 1991 and 2016 (1991, 1996-1997, 2001, 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 to 2006. ConocoPhillips Chairman and CEO Ryan Lance was API Board President from 2016 to 2018, and Exxon President and CEO Darren Woods was API Board President from 2018 to 2020. In 2020, API elected Phillips 66 Chairman and CEO Greg Garland to serve a two-year term as its Board President. Executives from ConocoPhillips also served as members of API's Board of Directors at various times.

h. Relevant information was shared among API and the Fossil Fuel Defendants and the Fossil Fuel Defendants' predecessors-in-interest through the following: (1) API's distribution of information to its members, and/or (2) participation of the Fossil Fuel Defendants' officers and other personnel, and those of the Fossil Fuel Defendants' predecessors-in-interest, on API boards, committees, and task forces.

i. The State's claims against API arise out of and are related to the acts and omissions of API in California and elsewhere that caused and will cause injuries in California.

19. The true names and capacities, whether individual, corporate, associate, or otherwise of Defendants Does 1 through 100, inclusive, are unknown to Plaintiff, who therefore sues said Defendants by such fictitious names pursuant to Code of Civil Procedure section 474. Plaintiff is informed and believes, and on that basis alleges, that each of the fictitiously named Defendants is responsible in some manner for the acts and occurrences herein alleged, and that the State's harms were caused by such Defendants.

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

20. As detailed below, each Fossil Fuel Defendant had actual knowledge, or should have known, that its fossil fuel products were hazardous in that the intended use of the fossil fuel products for combustion would substantially contribute to climate change and result in harms to the State. The Fossil Fuel Defendants obtained knowledge of the hazards of their products independently and through their membership and involvement in trade associations such as API.

21. The Fossil Fuel Defendants and API employed, financed, and participated in several industry-created front groups to serve their mission of flooding the markets with climate change disinformation and denialism. These organizations, acting on behalf of and under the supervision and control of the 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 and upon the extent to which climate change is caused by human activity. In sum, the Fossil Fuel Defendants, through their front groups, engaged in a significant marketing campaign that misrepresented and concealed the dangers of their fossil fuel products with the aim of protecting or enhancing sales of these products to consumers, including consumers in California. Defendants actively supervised, facilitated, consented to, and/or directly participated in the misleading messaging of these front groups, from which the Fossil Fuel Defendants profited significantly, including in the form of increased sales in California.

22. **The Global Climate Coalition (GCC)** was an industry group formed to preserve and expand consumer demand for fossil fuels by publicly casting doubt on climate science and opposing GHG emission reduction initiatives. The GCC was founded in 1989 in reaction to the first meeting of the Intergovernmental Panel on Climate Change (IPCC), the United Nations body for assessing the science related to climate change, and to NASA scientist James Hansen's presentation to the Senate Committee on Energy and Natural Resources, in which Hansen emphasized that climate change was already happening and would lead to dire consequences if left unaddressed. The GCC disbanded in or around 2001. Founding members included API, Shell Oil Company (currently, Shell); Texaco, Inc. (currently, Chevron); Amoco (currently, BP);

ARCO (owned by BP at the time); and Phillips Petroleum Company (currently, ConocoPhillips). Tom Lambrix, director of government relations for Phillips Petroleum, was chairman of the GCC.

III. JURISDICTION AND VENUE

23. This Court has original jurisdiction over this action pursuant to article VI, section 10, of the California Constitution.

24. This Court has personal jurisdiction over Defendants, pursuant to Code of Civil Procedure section 410.10, because each Defendant purposefully availed itself of the California market, and thus of the benefits of the laws of the State, during all times relevant to this Complaint, so as to render California courts' exercise of jurisdiction over each Defendant consistent with traditional notions of fair play and substantial justice. Each Fossil Fuel Defendant researched, developed, manufactured, designed, marketed, distributed, released, promoted, and/or otherwise sold its fossil fuel products in markets around the United States, including within California.

25. Additionally, jurisdiction is proper over each non-resident Defendant for the following reasons:

a. With respect to its subsidiaries, each non-resident Fossil Fuel Defendant parent 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, specifically communications strategies concerning climate change and the link between fossil fuel use and impacts on the environment. Each non-resident Fossil Fuel Defendant parent has the power to direct and control its non-resident subsidiaries named here. Thus, each subsidiary is the agent of its parent. As agents, the subsidiaries of each non-resident Fossil Fuel Defendant conducted activities in California at the direction and for the benefit of its parent company. Specifically, the subsidiaries furthered each parent company's campaign of deception and denial through misrepresentations, omissions, and affirmative promotion of the company's fossil fuel products as safe with knowledge of the climate change-related harms that would result from the intended use of those products, all of which resulted in climate change-related injuries in the State

and increased sales to the parent company. Therefore, the subsidiaries' jurisdictional activities are properly attributed to each parent company and serve as a basis to assert jurisdiction over each of the non-resident Fossil Fuel Defendant parent companies.

b. Through their various agreements with dealers, franchises, or otherwise, the Fossil Fuel Defendants direct and control the branding, marketing, sales, promotions, image development, signage, and advertising of their branded fossil fuel products at their respectively branded gas stations in California, including point-of-sale advertising and marketing. The Fossil Fuel Defendants dictate which grades and formulations of their gasoline may be sold at their respectively branded stations.

c. The Fossil Fuel Defendants, by and through API and other organizations like the GCC, conspired to conceal and misrepresent the known dangers of burning fossil fuels, to knowingly withhold material information regarding the consequences of using fossil fuel products, to spread knowingly false and misleading information to the public regarding the weight of climate science research, and to engage in massive campaigns to promote continued and increased 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 climate denialist front groups, API and each Fossil Fuel Defendant were and are members of this conspiracy. Defendants committed substantial acts to further the conspiracy in California by making affirmative misrepresentations to California consumers, as well as misleading them by omission, about the existence, causes, and effects of global warming; and by affirmatively promoting the Fossil Fuel Defendants' fossil fuel products as safe, with knowledge of the disastrous impacts that would result from the intended use of those products. A substantial effect of this conspiracy has also and will also occur in California, as the State has suffered and will suffer injuries from Defendants' wrongful conduct, including but not limited to the following: extreme heat, severe droughts, water shortages, catastrophic wildfires, public health injuries, massive storms, flooding, damage to agriculture, sea level rise, coastal erosion, damage to ecosystems and habitat, biodiversity disruption, and other social and economic consequences of these environmental changes. Defendants knew or should have known—based on information

provided to them from their internal research divisions, affiliates, trade associations, and industry groups—that their actions in California and elsewhere would result in these injuries in and to the State. Finally, the climate effects described herein are direct and foreseeable results of Defendants' conduct in furtherance of the conspiracy.

26. Venue is proper in this Court pursuant to Code of Civil Procedure section 393, subdivision (a), because the violations of law and the public nuisance alleged in this Complaint occurred in San Francisco County and throughout California.

IV. FACTUAL BACKGROUND

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

27. The earth's atmosphere is warming, sea level is rising, snow and ice cover is diminishing, oceans are warming and acidifying, and hydrologic systems have been altered, among other rapidly accelerating changes to our climate. These changes are directly harming people's health, lives, lifestyles, and livelihoods. According to the IPCC, the evidence that humans are causing this warming of the Earth is unequivocal.[3]

28. Greenhouse gas emissions caused by human activities are the most significant driver of climate change and ocean acidification.[4] Over the past couple of decades, those emission rates have accelerated, exceeding those predicted under previous "worst case" global emissions scenarios. The severity of the continuing impacts of climate change on California will depend on the success of mitigation and adaptation efforts in California and on the reduction of fossil fuel consumption.[5]

29. Greenhouse gases are largely byproducts of human combustion of fossil fuels to produce energy and use of fossil fuels to create petrochemical products. While there are several

[3] IPCC, Climate Change 2021: The Physical Science Basis, Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (2021) pp. v, 4, 41, 63, 150, 425, 506, available at https://report.ipcc.ch/ar6/wg1/IPCC_AR6_WGI_FullReport.pdf (as of June 5, 2024).

[4] *Id.* at p. 41.

[5] See Bedsworth et al., Statewide Summary Report, California's Fourth Climate Change Assessment (2018) pp. 8-13, 20, 70, available at https://www.climateassessment.ca.gov/state/ (as of June 5, 2024).

greenhouse gases contributing to climate change, CO_2 is the primary greenhouse gas emitted as a result of human activities.

30. 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 dramatic rise of the combustion of oil, gas, and coal, in particular in transportation and the stationary energy market.

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

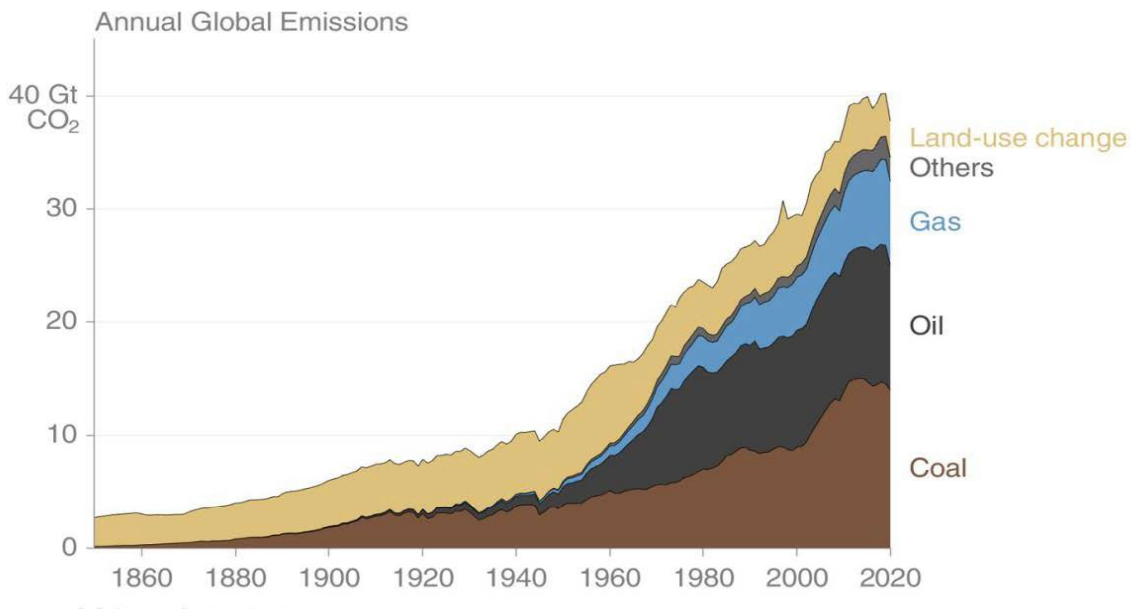

Figure 1: Annual Global Emissions, 1850–2020[6]

32. This acceleration of fossil fuel emissions has led to a correspondingly sharp rise in atmospheric concentration of CO_2. Since 1960, the concentration of CO_2 in the atmosphere has spiked from under 320 parts per million (ppm) to approximately 423 ppm.[7] The concentration of

[6] Global Carbon Project, Global Carbon Budget 2021 (Nov. 4, 2021) p. 83, available at https://www.globalcarbonproject.org/carbonbudget/archive/2021/GCP_CarbonBudget_2021.pdf (as of June 5, 2024).

[7] Global Monitoring Laboratory, NOAA, Trends in Atmospheric Carbon Dioxide, Full Record, available at https://gml.noaa.gov/ccgg/trends/mlo.html (as of June 5, 2024).

atmospheric CO_2 has also been accelerating. From 1960 to 1970, atmospheric CO_2 increased by an average of approximately 0.9 ppm per year; over the last five years, it has increased by approximately 2.4 ppm per year.[8]

33. Figure 2 indicates the tight nexus between the sharp increase in emissions from the combustion of fossil fuels and the steep rise of atmospheric concentrations of CO_2.

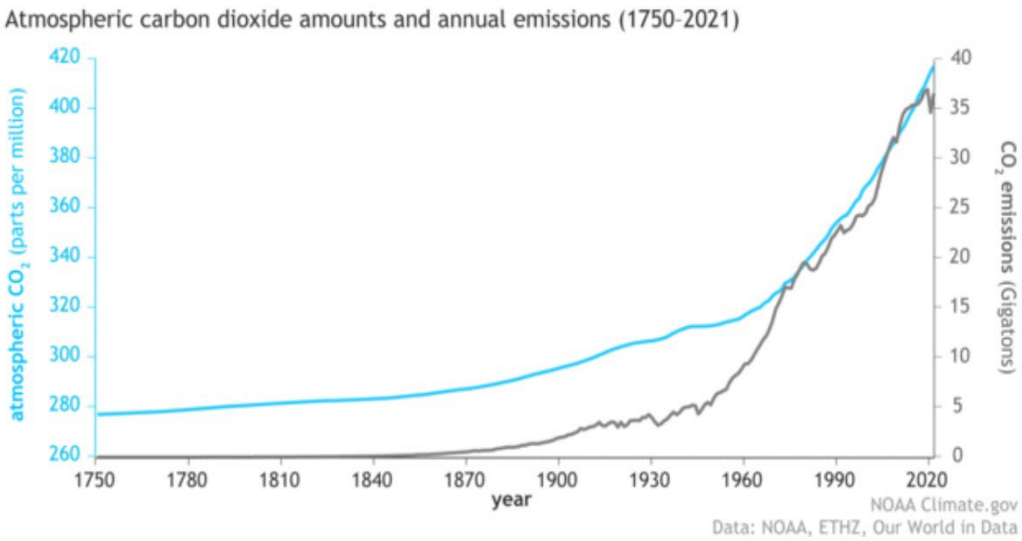

Figure 2: Atmospheric CO_2 Concentration and Annual Emissions[9]

34. Because of the increased burning of fossil fuel products, concentrations of greenhouse gases in the atmosphere are now at an unprecedented level, one not seen in at least three million years.[10]

35. As greenhouse gases accumulate in the atmosphere, the Earth radiates less energy back to space. This accumulation and associated disruption of the 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 heat waves. To date, global average surface temperatures

[8] Global Monitoring Laboratory, NOAA, Trends in Atmospheric Carbon Dioxide, Growth Rate, available at https://gml.noaa.gov/ccgg/trends/gr.html (as of June 5, 2024).

[9] Lindsey, NOAA, Climate Change: Atmospheric Carbon Dioxide (May 12, 2023), available at https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide (as of June 5, 2024).

[10] *More CO2 Than Ever Before in 3 Million Years, Shows Unprecedented Computer Simulation*, Science Daily (Apr. 3, 2019), available at https://www.sciencedaily.com/releases/2019/04/190403155436.htm (as of June 5, 2024).

have risen approximately 1.09°C (1.96°F) above preindustrial temperatures; temperatures in particular locations have risen more.

b. Changes to the global climate generally, bringing about longer droughts and dry periods interspersed with fewer and more severe periods of precipitation, and associated impacts to the quantity and quality of water resources available to both human and ecological systems.

c. Increased frequency and intensity of extreme weather events due to increases in evaporation, evapotranspiration, and precipitation, a consequence of the warming atmosphere's increased ability to hold moisture.

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

e. 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.

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

g. Ocean acidification, primarily due to the increased uptake of atmospheric carbon dioxide by the oceans.

h. Changes to terrestrial and marine ecosystems, and consequent impacts on the populations and ranges of flora and fauna.

36. As discussed below, these consequences of Defendants' tortious and deceptive conduct and its exacerbation of the climate crisis are already impacting California, its communities, its people's health, and its natural resources, and these impacts will continue to increase in severity. Absent Defendants' tortious and deceptive conduct and resultant contributions to global warming, these harmful effects would have been far less extreme than those currently occurring. Similarly, future harmful effects would also have been far less detrimental—or would have been avoided entirely.[11]

[11] See, e.g., Clark et al., *Consequences of Twenty-First-Century Policy for Multi-Millennial Climate and Sea-Level Change* (2016) 6 Nature Climate Change 360, 365 ("Our

37. From at least 1965 until the present, Defendants unduly inflated the market for fossil fuel products by aggressively promoting the use of these products while knowing their associated dangers, and by misrepresenting and concealing the hazards of those products to deceive consumers and the public about the consequences of everyday use of fossil fuel products. Consequently, substantially more anthropogenic greenhouse gases have been emitted into the environment than would have been emitted absent Defendants' tortious and deceptive conduct.

38. By quantifying GHG pollution attributable to the Fossil Fuel Defendants' products and conduct, climatic and environmental responses to those emissions are also calculable and can be attributed to the Fossil Fuel Defendants both on an individual and an aggregate basis.[12]

39. Defendants' tortious, deceptive, and unconscionable conduct, as alleged herein, caused a substantial portion of the global atmospheric GHG concentrations, and the past, ongoing, and future disruptions to the environment—and consequent injuries to California, its communities, and its resources—associated therewith.

40. Defendants, individually and collectively, have substantially and measurably contributed to California's climate crisis-related injuries.

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

41. Defendants have known about the potential warming effects of GHG emissions since as early as the 1950s, and they developed a sophisticated understanding of climate change that far exceeded the knowledge of the general public. Although it was concealed at the time, the industry's knowledge was uncovered in 2015 by journalists at *Inside Climate News* and the *Los Angeles Times*, among others.[13]

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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).").

[12] See Heede, *Tracing Anthropogenic Carbon Dioxide and Methane Emissions to Fossil Fuel and Cement Producers, 1854–2010* (2014) 122 Climatic Change 229, available at https://link.springer.com/article/10.1007/s10584-013-0986-y (as of June 5, 2024).

[13] See, e.g., Banerjee et al., *Exxon's Own Research Confirmed Fossil Fuels' Role in Global Warming Decades Ago*, L.A. Times (Sept. 16, 2015), available at https://insideclimatenews.org/news/16092015/exxons-own-research-confirmed-fossil-fuels-role-in-global-warming/ (as of June 5, 2024); Jennings et al., *How Exxon went from leader to skeptic on climate change research*, L.A. Times (Oct. 23, 2015), available at

42. In 1954, geochemist Harrison Brown and his colleagues at the California Institute of Technology wrote to API, informing the trade association of their finding that fossil fuels had caused atmospheric carbon dioxide levels to increase by about 5% since 1840.[14] API continued to fund the scientists for various research projects and measurements of carbon dioxide, but the results were never published.[15] In 1957, H.R. Brannon of Humble Oil Company (predecessor-in-interest to Exxon) measured an increase in atmospheric carbon dioxide attributable to fossil fuels, similar to—and in agreement with—that measured by Harrison Brown.[16]

43. In 1959, API organized an oil industry celebration in New York City.[17] High-level oil industry executives were in attendance, and one of the keynote speakers was the nuclear physicist Edward Teller. Teller warned the industry that "a temperature rise corresponding to a 10[%] 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."[18] 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."[19]

44. In 1965, the president of API, Frank Ikard, addressed leaders of the petroleum industry at the trade association's annual meeting. Ikard relayed the findings of a recent report to industry leaders, saying, "[o]ne of the most important predictions of the report is that carbon

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https://graphics.latimes.com/exxon-research (as of June 5, 2024); Jerving et al., *What Exxon knew about the Earth's melting Arctic*, L.A. Times (Oct. 9, 2015), available at https://graphics.latimes.com/exxon-arctic/ (as of June 5, 2024); Lieberman et al., *Big Oil braced for global warming while it fought regulations*, L.A. Times (Dec. 31, 2015), available at https://graphics.latimes.com/oil-operations (as of June 5, 2024).

[14] Franta, *Early Oil Industry Knowledge of CO2 and Global Warming* (2018) 8 Nature Climate Change 1024, 1024.

[15] *Ibid*.

[16] *Ibid.*; Brannon, Jr. et al., *Radiocarbon Evidence on the Dilution of Atmospheric and Oceanic Carbon by Carbon from Fossil Fuels* (1957) 38 Am. Geophysical Union Transactions 643, 644-46.

[17] See Nevins and Dunlop, Energy and Man: A Symposium (1960). See also Franta, *Early Oil Industry Knowledge of CO2 and Global Warming*, *supra*, p. 1024.

[18] Teller, *Energy Patterns of the Future*, in Energy and Man: A Symposium (1960) p. 58.

[19] *Id*. at p. 70.

dioxide is being added to the earth's atmosphere by the burning of coal, oil, and natural gas at such a rate 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 quoting 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."[20]

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

46. 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.[21] The assessment stated: "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."[22]

47. 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 ppm by 2000.[23] This projection turned out to almost exactly match the actual CO_2 concentrations measured in 2000 of 369.64 ppm.[24] The report explicitly connected the rise in

[20] Ikard, *Meeting the Challenges of 1966*, in Proceedings of the American Petroleum Institute (1965) p. 13, available at https://www.documentcloud.org/documents/5348130-1965-API-Proceedings (as of June 5, 2024).

[21] Robinson and Robbins, Stanford Research Institute, Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants (Feb. 1968) pp. 109-10, available at https://www.smokeandfumes.org/documents/document16 (as of June 5, 2024).

[22] *Id.* at pp. 108, 112.

[23] Robinson and Robbins, Stanford Research Institute, Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants Supplement (June 1969) p. 3.

[24] NASA Goddard Institute for Space Studies, Global Mean CO_2 Mixing Ratios (ppm):

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."[25] By virtue of their membership and participation in API at that time, the Fossil Fuel Defendants received or should have received the Stanford Research Institute reports, and thus were on notice of the conclusions in those reports. [26]

48. In 1977, James Black of Exxon gave a presentation to Exxon executives on the "greenhouse effect," which was summarized in an internal memo the following year. Black reported that "current scientific opinion overwhelmingly favors attributing atmospheric carbon dioxide increase to fossil fuel consumption," and that doubling atmospheric carbon dioxide would, according to the best climate model available, "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.[27] Black reported that the impacts of global warming would include "more rainfall," which would "benefit some areas and would harm others," and that "[s]ome 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." Finally, Black reported that "[p]resent thinking holds that man has a time window of five to ten years before the need for hard decisions regarding changes in energy strategies might become critical."[28] The figure below, reproduced from Black's memo, illustrates Exxon's understanding of the timescale and magnitude of global warming that its products would cause.

Observations, available at https://data.giss.nasa.gov/modelforce/ghgases/Fig1A.ext.txt (as of June 5, 2024).

[25] Robinson and Robbins, Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants Supplement, *supra*, p. 19.

[26] Abstracts of the Stanford Research Institute studies were included in a 1972 API status report to its members. See American Petroleum Institute, Committee for Air and Water Conservation, Environmental Research: A Status Report (Jan. 1972) p. 103, available at http://files.eric.ed.gov/fulltext/ED066339.pdf (as of June 5, 2024).

[27] J.F. Black, Exxon Research and Engineering Co., memorandum to F.G. Turpin, Exxon Research and Engineering Co. re The Greenhouse Effect (June 6, 1978) pp. 2, 23, available at https://www.documentcloud.org/documents/2805568-1978-Exxon-Presentation-on-Greenhouse-Effect (as of June 5, 2024).

[28] *Id.* at p. 2.

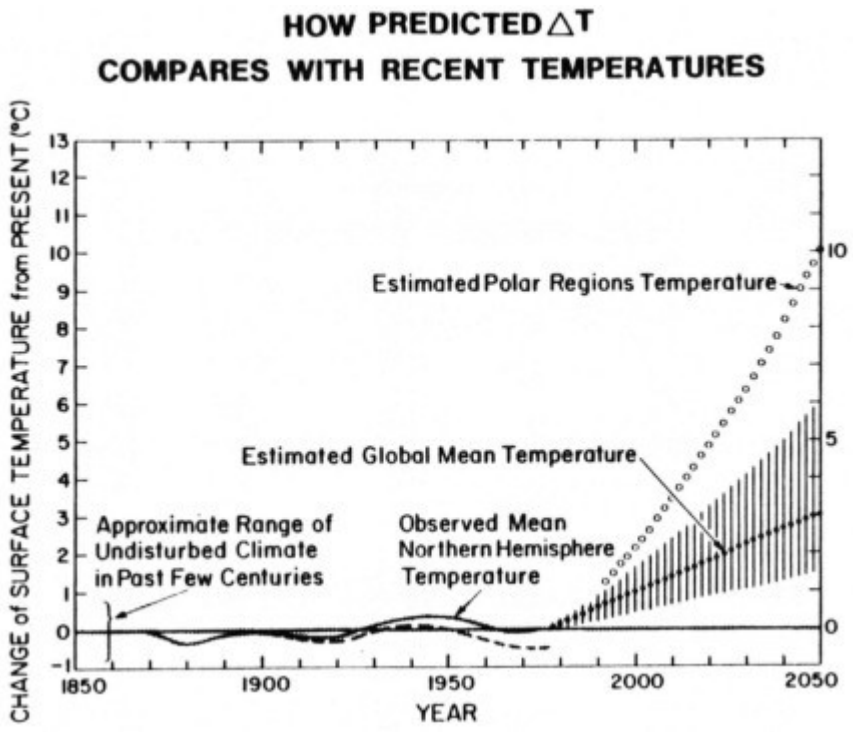

Figure 3: Future Global Warming Predicted Internally by Exxon in 1978[29]

49. In 1979, an internal Exxon memorandum stated, "The most widely held theory [about the increase in CO_2 concentration in the atmosphere] is that: The increase 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 added that, if limits were not placed on fossil fuel production,

> Noticeable temperature changes would occur around 2010 as the [CO_2] concentration reaches 400 ppm. 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[.][30]

[29] *Id.* at p. 26. The company predicted global warming of 1°C to 3°C by 2050, with 10°C warming in polar regions. The difference between the lower dashed and solid curves prior to 1977 represents global warming that Exxon believed may already have been occurring. (*Ibid.*)

[30] W.L. Ferrall, Exxon Research and Engineering Co., memorandum to Dr. R.L. Hirsch re Controlling Atmospheric CO_2 (Oct. 16, 1979) pp. 1-2, 5, available at https://www.industrydocuments.ucsf.edu/docs/mqwl0228 (as of June 5, 2024).

50. Those projections proved remarkably accurate. Annual average atmospheric CO_2 concentrations surpassed 400 ppm in 2015 for the first time in millions of years.[31] Limiting the carbon dioxide concentration in the atmosphere to 440 ppm, or a 50% increase over preindustrial levels, which the Exxon 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 ground to avoid doubling atmospheric carbon dioxide concentrations. Certain fossil fuels, such as shale oil, could not be substantially exploited at all.[32]

51. But instead of heeding these dire and repeated warnings, in November 1979, according to internal correspondence, Exxon urged "a very aggressive defensive program in . . . atmospheric science and climate because there is a good probability that legislation affecting our business will be passed."[33] It urged an expanded research effort to "influence possible legislation on environmental controls" and suggested the formation of a "small task force" to evaluate a potential program in CO_2 and climate, acid rain, carcinogens, fine particulates, and other pollution issues caused by fossil fuels.[34]

52. In 1979, API and its members, including the Fossil Fuel Defendants, convened a Task Force to monitor and share cutting-edge climate research among members of the oil industry. This Climate and Energy Task Force (hereinafter referred to as "CO_2 Task Force") included senior scientists and engineers from nearly every major U.S. and multinational oil and gas company—including Exxon, Mobil, Amoco, Phillips, Texaco, Shell, and Standard Oil of Ohio, as well as Standard Oil of California and Gulf Oil, the predecessors to Chevron—and was charged with monitoring research, evaluating the implications of emerging science for the petroleum and

[31] Jones, *How the World Passed a Carbon Threshold and Why It Matters*, Yale Env't 360 (Jan. 26, 2017), available at http://e360.yale.edu/features/how-the-world-passed-a-carbon-threshold-400ppm-and-why-it-matters (as of June 5, 2024).

[32] W.L. Ferrall, Controlling Atmospheric CO_2, *supra*, pp. 3, 6-7.

[33] H. Shaw memorandum to H.N. Weinberg re Research in Atmospheric Science (Nov. 19, 1979) p. 2, available at https://www.industrydocuments.ucsf.edu/docs/yqwl0228 (as of June 5, 2024).

[34] *Id.* at pp. 1-2.

gas industries, and identifying where potential reductions in GHG emissions from Defendants' fossil fuel products could be made.[35]

53. In 1979, a paper prepared by API for the CO_2 Task Force asserted that CO_2 concentrations were rising, and predicted that, although global warming would occur, it would likely go undetected until approximately the year 2000 because its effects were being temporarily masked by a natural cooling trend, which would revert to a warming trend around 1990, adding to the warming caused by CO_2.[36]

54. In 1980, at the invitation of the CO_2 Task Force, climate expert J. Laurman delivered to API members a presentation providing 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."[37] Laurmann informed the CO_2 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."[38] According to Laurmann, unless fossil fuel production and use were controlled, atmospheric carbon dioxide would be twice preindustrial levels by 2038, using a 3% per annum growth of atmospheric release rate, 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

[35] Banerjee, *Exxon's Oil Industry Peers Knew About Climate Dangers in the 1970s, Too*, Inside Climate News (Dec. 22, 2015), available at https://insideclimatenews.org/news/22122015/exxon-mobil-oil-industry-peers-knew-about-climate-change-dangers-1970s-american-petroleum-institute-api-shell-chevron-texaco/ (as of June 5, 2024).

[36] R.J. Campion memorandum to J.T. Burgess re Comments on The API's Background Paper on CO2 Effects (Sept. 6, 1979), available at https://www.industrydocuments.ucsf.edu/docs/lqwl0228 (as of June 5, 2024).

[37] J. J. Nelson, American Petroleum Institute, letter to AQ-9 Task Force re The CO2 Problem; Addressing Research Agenda Development (Mar. 18, 1980) p. 2, available at https://www.industrydocuments.ucsf.edu/docs/gffl0228 (as of June 5, 2024).

[38] *Id.* at pp. 9-10 (full capitalization in original removed).

Laurmann warned the CO_2 Task Force that global warming of 2.5°C would "bring[] world economic growth to a halt." The minutes of the meeting, which were distributed to the entire CO_2 Task Force, 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 potential research into the market and technical requirements for a worldwide "energy source changeover" away from fossil fuels.[39]

55. In 1980, a Canadian Esso (Exxon) company reported to managers and staff at affiliated Esso and Exxon companies that there was "no doubt" that fossil fuels were aggravating the build-up of CO_2 in the atmosphere, and 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."[40]

56. In December 1980, an Exxon manager distributed a memorandum on the "CO_2 Greenhouse Effect" attributing future buildup of carbon dioxide to fossil fuel use, and explaining that internal calculations indicated that atmospheric carbon dioxide could double by around 2060, "most likely" resulting in global warming of approximately 3.0 ± 1.5°C.[41] Calculations predicting a lower temperature increase, such as 0.25°C, were "not held in high regard by the scientific community[.]" The memo also reported that such global warming would cause "increased rainfall[] and increased evaporation," which would have a "dramatic impact on soil moisture, and in turn, on agriculture" and other "serious global problems[.]" 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.[42] 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

[39] *Id.* at pp. 1, 13.

[40] Imperial Oil Ltd., Review of Environmental Protection Activities for 1978–1979 (Aug. 6, 1980) p. 2, available at http://www.documentcloud.org/documents/2827784-1980-Imperial-Oil-Review-of- Environmental.html#document/ (as of June 5, 2024).

[41] Henry Shaw memorandum to T.K. Kett re Exxon Research and Engineering Company's Technological Forecast: CO2 Greenhouse Effect (Dec. 18, 1980) p. 3, available at https://www.documentcloud.org/documents/2805573-1980-Exxon-Memo-Summarizing-Current-Models-And.html (as of June 5, 2024).

[42] *Id.* at pp. 3-5.

memo estimated that such non-fossil energy technologies "would need about 50 years to penetrate and achieve roughly half of the total [energy] market."[43] The memo included the figure below, which illustrates both the global warming anticipated by Exxon and the company's understanding that significant global warming would occur:

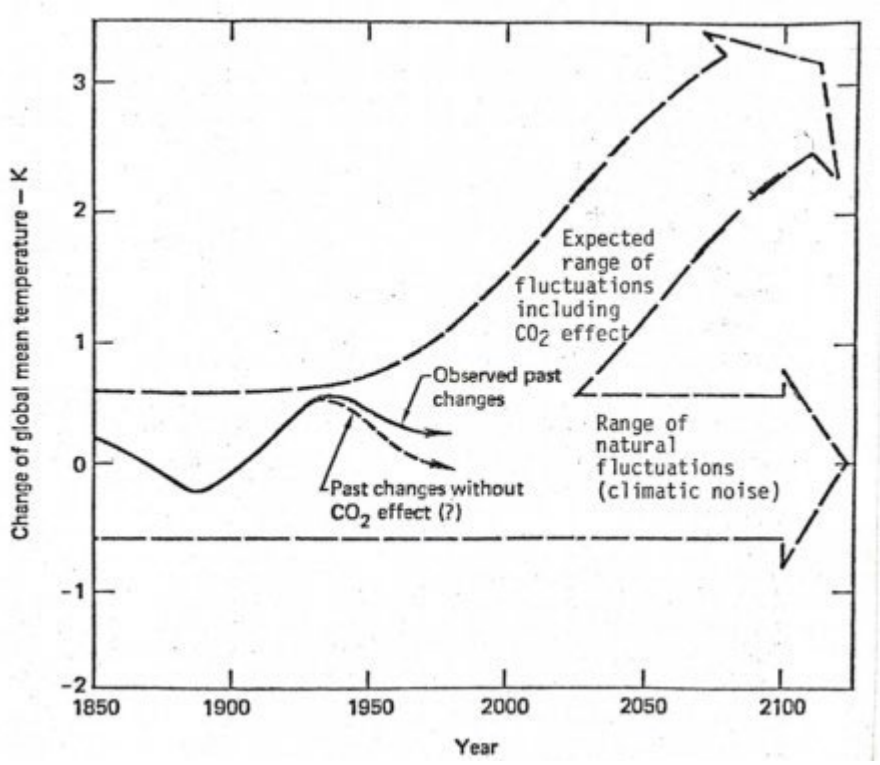

Figure 4: Future Global Warming Predicted Internally by Exxon in 1980[44]

57. 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.[45] The study reviewed Exxon's carbon dioxide research and considered whether to expand its research on carbon dioxide or global warming further. It recommended against expanding those research areas because Exxon's current research programs were sufficient for achieving the company's goals of closely monitoring federal research, building credibility and public relations value, and

[43] *Id.* at pp. 5-6.

[44] *Id.* at p. 12. 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.

[45] G.H. Long, Exxon Research and Engineering Co., letter to P.J. Lucchesi et al. re Atmospheric CO Scoping Study (Feb. 5, 1981), https://www.industrydocuments.ucsf.edu/docs/yxfl0228 (as of June 5, 2024).

developing in-house expertise regarding CO_2 and global warming, and noted that Exxon employees were actively monitoring and keeping the company apprised of outside research developments, including those on climate modeling and "CO_2-induced effects." In discussing "options for reducing CO_2 build-up in the atmosphere," the study noted that although capturing CO_2 from flue gases (i.e., exhaust gas produced by combustion) was technologically possible, the cost was high, and "energy conservation or shifting to renewable energy sources[] represent the only options that might make sense."[46]

58. Thus, by 1981, Exxon and other fossil fuel companies were actively monitoring all aspects of CO_2 and global warming research, and Exxon had recognized that a shift away from fossil fuels and towards renewable energy sources would be necessary to avoid a large CO_2 build-up in the atmosphere and resultant global warming.

59. An Exxon scientist warned 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."[47] The memo expressed concern about 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 later produce effects which will indeed be catastrophic (at least for a substantial fraction of the world's population)."[48]

60. In 1982, another report prepared for API by climate scientists recognized that the atmospheric CO_2 concentration had risen significantly compared to the concentration at the beginning of the industrial revolution. 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

[46] *Ibid.*

[47] R.W. Cohen memorandum to W. Glass (Aug. 18, 1981), available at http://www.climatefiles.com/exxonmobil/1981-exxon-memo-on-possible-emission-consequences-of-fossil-fuel-consumption (as of June 5, 2024).

[48] *Ibid*.

affected."[49] Exxon's own modeling research confirmed this.[50] In a 1982 internal memorandum, Exxon's Corporate Research and Science Laboratories acknowledged a consensus "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 [5.4 ± 2.7 °F]" as well as "unanimous agreement in the scientific community that a temperature increase of this magnitude would bring about significant changes in the earth's climate[.]"[51]

61. Also in 1982, Exxon's Environmental Affairs Manager distributed a primer on climate change to Exxon management; it was "restricted to Exxon personnel and not [to be] distributed externally."[52] The primer explained the science behind climate change, confirmed fossil fuel combustion as a primary anthropogenic contributor to global warming, and estimated a CO_2 doubling by 2090 with a "Most Probable Temperature Increase" of more than 2°C over the 1979 level, as shown in the figure on the following page.[53] The report also warned 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 become much drier. It further warned of "potentially catastrophic effects that must be considered[.]"[54] It concluded that "[a]ll biological systems are likely to be affected," and "the most severe economic effects could be on agriculture."[55]

[49] American Petroleum Institute, Climate Models and CO_2 Warming: A Selective Review and Summary (Mar. 1982) p. 4, available at https://www.climatefiles.com/trade-group/american-petroleum-institute/api-climate-models-and-co2-warming-a-selective-review-and-summary/ (as of June 5, 2024).

[50] See Roger W. Cohen, Exxon Research and Engineering Co., memorandum to A.M. Natkin, Office of Science and Technology, Exxon Corp. (Sept. 2, 1982), available at https://www.climatefiles.com/exxonmobil/1982-exxon-memo-summarizing-climate-modeling-and-co2-greenhouse-effect-research/ (as of June 5, 2024).

[51] *Id.* at p. 1.

[52] M.B. Glaser, Exxon Research and Engineering Co., memorandum to R.W. Cohen et al. re CO_2 "Greenhouse" Effect (Nov. 12, 1982) p. 1, available at https://insideclimatenews.org/wp-content/uploads/2015/09/1982-Exxon-Primer-on-CO2-Greenhouse-Effect.pdf (as of June 5, 2024).

[53] *Id.* at pp. 1, 7.

[54] *Id.* at p. 11.

[55] *Id.* at p. 14.

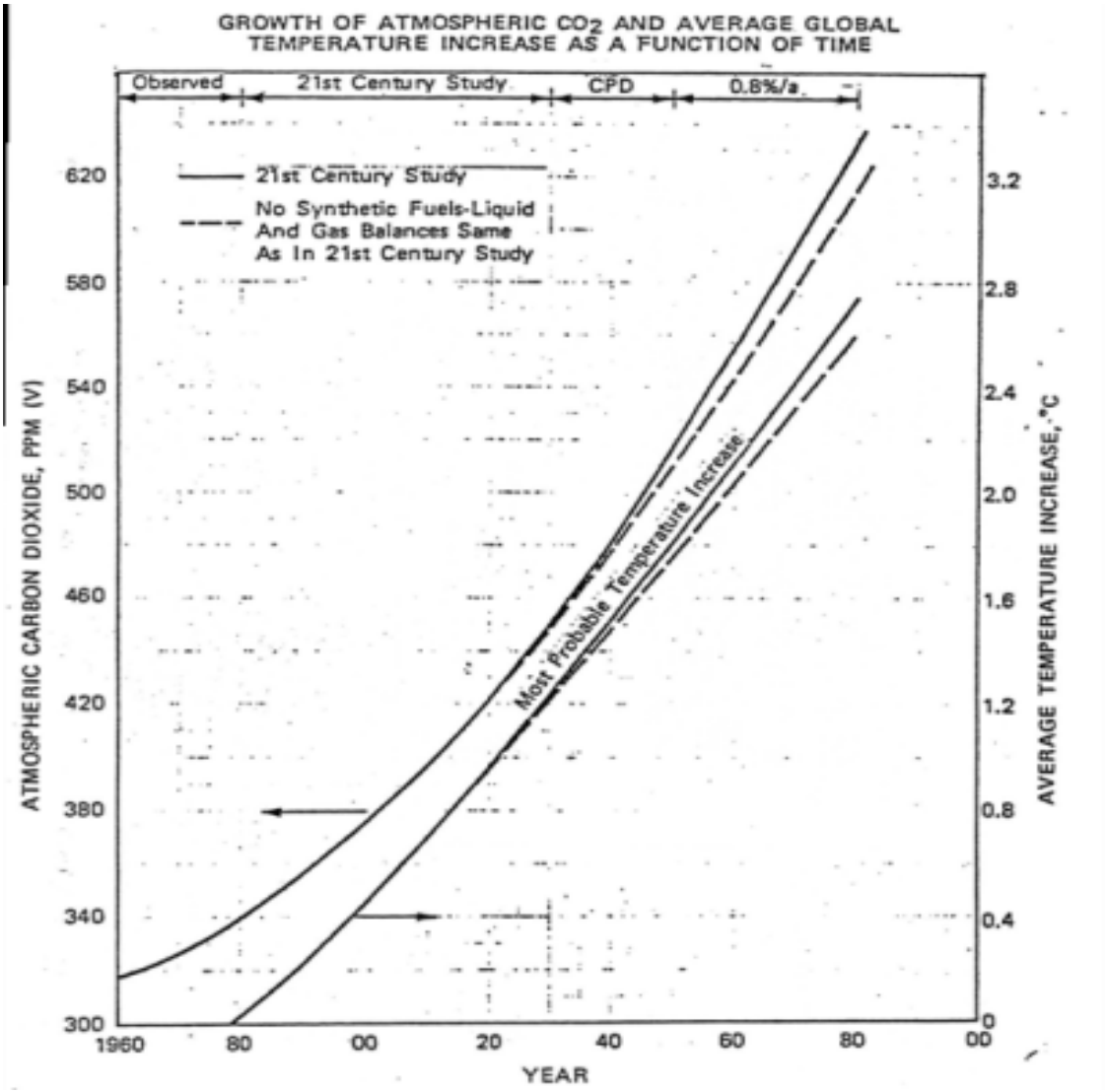

Figure 5: Exxon's Internal Prediction of Future CO_2 Increase and Global Warming from 1982[56]

62. 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[.]"[57] 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

[56] *Id.* at p. 7. The company predicted a doubling of atmospheric carbon dioxide concentrations above preindustrial levels by around 2090 (left curve), with a temperature increase of more than 2°C over the 1979 level (right curve).

[57] *Id.* at p. 14.

century" (gross national product was $25,640 billion in 2022).[58] To avoid such impacts, the report discussed a scientific analysis 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."[59] The primer also noted that the analysis indicated that other greenhouse gases related to fossil fuel production, such as methane (which is a more powerful GHG than CO_2), "may significantly contribute to a global warming," and that concerns over CO_2 would be reduced if fossil fuel use were decreased due to "high price, scarcity, [or] unavailability."[60] "Mitigation of the 'greenhouse effect' would require major reductions in fossil fuel combustion," the primer stated.[61] The primer was widely distributed to Exxon leadership.

63. 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 climate modeling.[62] 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 in the biosphere. The time required for doubling of atmospheric CO_2 depends on future world consumption of fossil fuels. Current projections indicate that doubling will occur sometime in the latter half of the 21st century. The models predict that CO_2 climate changes should be observable well before doubling. It is generally believed that the first CO_2-induced temperature increase will not be observable until around the year 2000.

[58] *Ibid.*; See Federal Reserve Bank of St. Louis, Gross National Product (updated Mar. 30, 2023), available at https://fred.stlouisfed.org/series/GNPA (as of June 5, 2024).
[59] M.B. Glaser, CO2 "Greenhouse" Effect, *supra*, p. 18.
[60] *Id.* at pp. 18, 29.
[61] *Id.* at p. 2.
[62] Roger W. Cohen, Exxon Research and Engineering Co., memorandum to A.M. Natkin, Exxon Corp. Office of Science and Technology (Sept. 2, 1982), available at https://www.climatefiles.com/exxonmobil/1982-exxon-memo-summarizing-climate-modeling-and-co2-greenhouse-effect-research/ (as of June 5, 2024).

Cohen described Exxon's own climate modeling experiments, reporting that they produced "a global averaged 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."

64. 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 twenty-first 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.[63]

65. 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 the Fossil Fuel Defendants to share their research efforts and corroborate their findings related to anthropogenic GHG emissions.[64]

66. 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 could "create significant

[63] Banerjee, *More Exxon Documents Show How Much It Knew About Climate 35 Years Ago*, Inside Climate News (Dec. 1, 2015), available at https://insideclimatenews.org/news/01122015/documents-exxons-early-co2-position-senior-executives-engage-and-warming-forecast/ (as of June 5, 2024).

[64] Banerjee, *Exxon's Oil Industry Peers Knew About Climate Dangers in the 1970s, Too*, Inside Climate News (Dec. 22, 2015), available at https://insideclimatenews.org/news/22122015/exxon-mobil-oil-industry-peers-knew-about-climate-change-dangers-1970s-american-petroleum-institute-api-shell-chevron-texaco/ (as of June 5, 2024).

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)."[65]

67. The Shell report noted 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." The authors mentioned the need to consider policy changes, 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."[66]

68. In 1991, a researcher for Exxon's subsidiary Imperial Oil stated to an audience of engineers that greenhouse gases are rising "due to the burning of fossil fuels. . . . Nobody disputes this fact."[67]

69. The fossil fuel industry was at the forefront of carbon dioxide research for much of the latter half of the twentieth century. It worked with many of the field's top researchers to produce exceptionally sophisticated studies and models. For instance, as early as the 1980s, Shell began developing and employing scenarios to plan how the company could respond to various global forces in the future. In a confidential 1989 scenario planning report, Shell noted that evidence "that mankind and his actions could affect the climate . . . is strong and accumulating fast." In that report, Shell evaluated a scenario it called "Sustainable World," which would address climate change by reducing CO_2 emissions to 1989 levels by 2010. Contrasting the "Sustainable World" scenario with another scenario titled "Global Mercantilism," Shell reported that under a "Sustainable World" scenario, global temperatures would likely increase between 0.5

[65] Shell Internationale Petroleum, Greenhouse Effect Working Group, The Greenhouse Effect (May 1988) pp. 1, 27, available at https://www.documentcloud.org/documents/4411090-Document3.html#document/p9/a411239 (as of June 5, 2024).

[66] *Id.* at pp. 1, 6.

[67] Jerving et al., *Special Report: What Exxon Knew About Global Warming's Impact on the Arctic*, L.A. Times (Oct. 10, 2015), available at https://www.latimes.com/business/la-na-adv-exxon-arctic-20151011-story.html (as of June 5, 2024).

and 1.5 degrees Celsius from CO_2 concentration increases that had already occurred by 1989, but the scenario "could mitigate the problem." In contrast, under the "Global Mercantilism" scenario, which forecasted a continual increase in CO_2 emissions, CO_2 concentrations and temperatures would rise considerably higher.[68]

70. In another 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 US. 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 1995 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 become fiercely anti-tobacco. Direct-action campaigns against companies escalate. Young consumers, especially, demand action.[69]

71. Fossil fuel companies did not just consider climate change impacts in scenarios; they also incorporated those impacts in their on-the-ground planning. In the mid-1990s, Exxon, Shell, and Imperial Oil (Exxon) 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

[68] Shell, Scenarios 1989-2010: Challenge and Response (1989), pp. 33, 35, available at https://s3.documentcloud.org/documents/23776891/1989-oct-confidential-shell-group-planning-scenarios-1989-2010-challenge-and-response-disc-climate-refugees-and-shift-to-non-fossil-fuels.pdf (as of June 5, 2024).

[69] Royal Dutch Shell Group, Group Scenarios 1998–2020 (1998) pp. 115, 118, available at http://www.documentcloud.org/documents/4430277-27-1-Compiled.html (as of June 5, 2024).

to global warming, of 0.5 m [1.64 feet] may be assumed for the proposed project life (25 years)."[70]

72. Climate change research conducted by Defendants and their industry associations frequently acknowledged uncertainties in their climate modeling. Those uncertainties, however, were largely with respect to the magnitude and timing of climate impacts resulting from fossil fuel consumption, not with respect to whether significant changes would eventually occur. Defendants' researchers and the researchers at their industry associations harbored little doubt that climate change was occurring and that fossil fuel products were, and are, the primary cause.

73. Despite the overwhelming information about the threats to people and the planet posed by continued unabated use of their fossil fuel products, the Fossil Fuel Defendants failed to act as they reasonably should have to avoid or mitigate those dire adverse impacts. The Fossil Fuel Defendants instead undertook affirmative efforts to promote their fossil fuel products as safe and cast doubt in the public's mind about the burgeoning scientific consensus on climate change, as described below. This was an abdication of the Fossil Fuel Defendants' responsibility to consumers and the public, including the State, to act on their 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 Intended Use of Fossil Fuel Products, and Instead Affirmatively Concealed Those Harms by Engaging in a Campaign of Deception to Increase the Use of Those Products

74. By 1980, Defendants had amassed a compelling body of knowledge about the role of anthropogenic greenhouse gases, specifically those emitted from the use of fossil fuel products, in causing climate change and its cascading impacts, including disruptions to the hydrologic cycle, extreme precipitation, extreme drought, increasing temperatures, and associated consequences for human communities and the environment.

75. On notice that their products were causing global climate change and dire effects on the planet, the Fossil Fuel Defendants and API faced the decision whether to take steps to limit

[70] ExxonMobil, *Sable Project Development Plan*, vol. 3, Environmental Impact Statement (Feb. 1996), pp. 4-77.

the damage that the use of fossil fuel products was causing and would continue to cause Earth's inhabitants, including the people of California. Before or thereafter, Defendants could and reasonably should have taken any number of steps to mitigate the damage caused by the use of fossil fuel products. Their own comments reveal an awareness of what steps should have been taken. Defendants should have warned civil society and California consumers of the dangers known to Defendants of the unabated use of fossil fuel products, and they could and should have taken reasonable steps to limit the greenhouse gases emitted by use of fossil fuel products. This would have allowed policymakers to act sooner and more quickly to limit fossil fuel consumption and accelerate the transition to non-carbon sources. This work is now underway, but was wrongfully delayed by Defendants' deception. Simply put, Defendants should have issued warnings commensurate with their own understanding of the risks posed by the expected and intended uses of fossil fuel products. Instead, they put their profits first.

76. Not only did Defendants fail to issue any warnings, but several key events during the period between 1988 and 1992 prompted them to change their tactics from pursuing, then concealing, general research and internal discussion on climate change to engaging in a public campaign aimed at deceiving consumers and the public, including the inhabitants of California. These key events included the following:

a. In 1988, National Aeronautics and Space Administration (NASA) scientists confirmed that human activities were actually contributing to global warming. On June 23, 1988, 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*.[71]

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. Three 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.

[71] See Frumhoff et al., *The Climate Responsibilities of Industrial Carbon Producers* (2015) 132 Climatic Change 157, 161, available at http://dx.doi.org/10.1007/s10584-015-1472-5 (as of June 5, 2024).

Bush pledged that his presidency would combat the greenhouse effect with "the White House effect."[72] Political will in the United States to reduce anthropogenic GHG emissions and mitigate the harms associated with Defendants' fossil fuel products was gaining momentum.

c. In December 1988, the United Nations formed the 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.

d. In 1990, the IPCC published its First Assessment Report on anthropogenic climate change,[73] which 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.[74]

The IPCC reconfirmed those conclusions in a 1992 supplement to the First Assessment Report.[75]

e. The United Nations held the 1992 Earth Summit in Rio de Janeiro, Brazil, a major, newsworthy gathering of over 170 world governments, of which more than 100 sent their heads of state. The Summit resulted in the United Nations Framework Convention on Climate Change, an international environmental treaty providing protocols for future negotiations aimed at "stabiliz[ing] greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."[76]

77. Defendants' campaign of deception focused on concealing, discrediting, and/or misrepresenting information that tended to support restricting the use of fossil fuels and

[72] N.Y. Times Editorial Board, *The White House and the Greenhouse*, N.Y. Times (May 9, 1989), available at https://www.nytimes.com/1989/05/09/opinion/the-white-house-and-the-greenhouse.html (as of June 5, 2024).

[73] See IPCC, Reports, available at https://www.ipcc.ch/reports/ (as of June 5, 2024).

[74] IPCC, Climate Change: The IPCC Scientific Assessment (Houghton et al. edits. 1990) p. xi, available at https://www.ipcc.ch/report/ar1/wg1/ (as of June 5, 2024).

[75] IPCC, Climate Change: The 1990 and 1992 IPCC Assessments (1992) p. 52, available at https://www.ipcc.ch/report/climate-change-the-ipcc-1990-and-1992-assessments (as of June 5, 2024).

[76] United Nations, United Nations Framework Convention on Climate Change (1992) art. 2, p. 4, available at https://unfccc.int/resource/docs/convkp/conveng.pdf (as of June 5, 2024).

transitioning society to a lower-carbon future, thereby decreasing demand for Fossil Fuel Defendants' products. The campaign enabled the Fossil Fuel Defendants to continue their business practice of exploiting fossil fuel reserves and concurrently externalizing the social and environmental costs of their fossil fuel products. Those activities ran counter 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 to communities like California's.

78. The Fossil Fuel Defendants—both 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, as well as a plan to influence consumers indirectly by affecting public opinion through the dissemination of misleading information to the press, government, and academia. Although the Fossil Fuel Defendants were competitors in the marketplace, they combined and collaborated with each other and with API on this public campaign to misdirect and stifle public knowledge in order to increase sales and protect profits. The effort included promoting hazardous fossil fuel products through advertising campaigns that failed to warn of the existential risks associated with the use of those products and that were designed to influence consumers to continue using the Fossil Fuel Defendants' fossil fuel products, irrespective of those products' damage to communities and the environment.

79. 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."[77] 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)

[77] Joseph M. Carlson, memorandum re The Greenhouse Effect (Aug. 3, 1988) p. 7, available at https://assets.documentcloud.org/documents/3024180/1998-Exxon-Memo-on-the-Greenhouse-Effect.pdf (as of June 5, 2024).

"[r]esist the overstatement and sensationalization of potential Greenhouse effect which could lead to noneconomic development of nonfossil fuel resources."[78]

80. 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 CO_2 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 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.[79]

81. A 1994 Shell report entitled "The Enhanced Greenhouse Effect: A Review of the Scientific Aspects" by Royal Dutch Shell's Peter Langcake stands in stark contrast to the company's 1988 report on the same topic. Whereas before the authors had 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 falsely 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 climate variability, which is still largely unpredictable." The Shell position is stated clearly in the report: "Scientific uncertainty and the evolution of energy systems indicate that policies to curb greenhouse gas emissions beyond 'no

[78] *Id*. at pp. 7-8.

[79] Martin Hoffert, former Exxon consultant and Professor Emeritus of Physics at New York University, Examining the Oil Industry's Efforts to Suppress the Truth About Climate Change, Hearing Before the House Comm. on Oversight and Reform, Subcomm. on Civil Rights and Civil Liberties, 116th Cong., 1st Sess., at pp. 7-8 (Oct. 23, 2019), available at https://www.congress.gov/event/116th-congress/house-event/110126 (as of June 5, 2024).

regrets' measures could be premature, divert resources from more pressing needs and further distort markets."[80]

82. 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 internal knowledge and peer-reviewed science, the publication ascribed the rise in temperature since the late nineteenth 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 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 U.S., 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.[81]

[80] Langcake, Shell Internationale Petroleum, The Enhanced Greenhouse Effect: A Review of the Scientific Aspects (Dec. 1994) pp. 1, 9, 14, available at https://www.documentcloud.org/documents/4411099-Document11.html#document/p15/a411511 (as of June 5, 2024).

[81] Exxon Corp., *Global Warming: Who's Right?* (1996) pp. 3, 5-7, available at https://www.documentcloud.org/documents/2805542-Exxon-Global-Warming-Whos-Right.html (as of June 5, 2024).

83. 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 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 "[p]olicies 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 conclusive—or even strongly suggestive—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."[82]

84. 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:

> [S]ome people . . . 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.
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> . . . .
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> 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.
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> 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

[82] Gentille et al., American Petroleum Institute, Reinventing Energy: Making the Right Choices (1996) pp. 2, 11, 63, 79, available at https://www.documentcloud.org/documents/4224133-Reinventing-Energy (as of June 5, 2024).

> premise that it will affect climate defies common sense and lacks foundation in our current understanding of the climate system.
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> . . . .
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> [L]et'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.[83]

85. Imperial Oil (Exxon) CEO Robert Peterson falsely denied the established connection between the Fossil Fuel Defendants' fossil fuel products and anthropogenic climate change in an essay in the Summer 1998 issue of Imperial Oil's magazine, "Imperial Oil Review":

> [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 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.
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> . . . .
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> 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.[84]

86. Mobil (Exxon) 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. Many of those advertorials communicated doubt about the reality and severity of human-caused climate change, even as industry scientists contemporaneously reiterated that climate change was real, serious, and caused by human activity. The ads addressed various aspects of the public discussion of climate change and sought to undermine the justifications for tackling GHG emissions as unsettled science. The 1997 advertorial on the following page argued that economic analysis of emissions restrictions was faulty and inconclusive and therefore provided a justification for delaying action on climate change.

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[83] Lee R. Raymond, Chairman and Chief Executive Officer, Exxon Corp., in an address at the World Petroleum Congress at pp. 4, 8, 9, 11, (Oct. 13, 1997), available at https://assets.documentcloud.org/documents/2840902/1997-Lee-Raymond-Speech-at-China-World-Petroleum.pdf (as of June 5, 2024).

[84] Peterson, *A Cleaner Canada*, Imperial Oil Review (1998) p. 29, available at https://www.documentcloud.org/documents/6555577-1998-Robert-PetersonA-Cleaner-Canada-Imperial.html (as of June 5, 2024).

like race,

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. □

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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 6: 1997 Mobil Advertorial[85]

87. Many other Exxon and Mobil advertorials falsely or misleadingly characterized the state of climate science research to the readership of *The New York Times's* op-ed page. A sample of misleading or outright untruthful statements in paid advertisements that resembled op-eds includes the following:

- "We don't know enough about the factors that affect global warming and the degree to which—if any—that man-made emissions (namely, carbon dioxide) contribute to increases in Earth's temperature."[86]
- "[G]reenhouse-gas emissions, which have a warming effect, are offset by another combustion product—particulates—which leads to cooling."[87]
- "Even after two decades of progress, climatologists are still uncertain how—or even if—the buildup of man-made greenhouse gases is linked to global warming."[88]
- "[I]t is impossible for scientists to attribute the recent small surface temperature increase to human causes."[89]

88. A quantitative analysis of Exxon's climate communications between 1989 and 2004 found that, while 83% of the company's peer-reviewed papers and 80% of its internal documents acknowledged the reality and human origins of climate change, 81% of its advertorials communicated doubt about those conclusions.[90] Based on this "statistically significant"

[85] Mobil, *When Facts Don't Square with the Theory, Throw Out the Facts*, in N.Y. Times (Aug. 14, 1997) p. A31, available at https://www.documentcloud.org/documents/705550-mob-nyt-1997-aug-14-whenfactsdontsquare.html (as of June 5, 2024).

[86] Mobil, *Climate Change: A Prudent Approach*, in N.Y. Times (Nov. 13, 1997) p. A27, available at https://www.documentcloud.org/documents/705548-mob-nyt-1997-11-13-climateprudentapproach.html (as of June 5, 2024).

[87] Mobil, *Less Heat, More Light on Climate Change*, in N.Y. Times (July 18, 1996) p. A23, available at https://www.documentcloud.org/documents/705544-mob-nyt-1996-jul-18-lessheatmorelight.html (as of June 5, 2024).

[88] Mobil, *Climate Change: Where We Come Out*, in N.Y. Times (Nov. 20, 1997) p. A31, available at https://www.documentcloud.org/documents/705549-mob-nyt-1997-11-20-ccwherewecomeout.html (as of June 5, 2024) (emphasis in original).

[89] ExxonMobil, *Unsettled Science*, in N.Y. Times (Mar. 23, 2000), available at https://www.documentcloud.org/documents/705605-xom-nyt-2000-3-23-unsettledscience (as of June 5, 2024).

[90] Supran and Oreskes, *Assessing ExxonMobil's Climate Change Communications (1977–2014)* (2017) 12(8) Environmental Research Letters, available at https://iopscience.iop.org/article/10.1088/1748-9326/aa815f/pdf (as of June 5, 2024).

discrepancy between internal and external communications, the authors concluded that "ExxonMobil misled the public."[91]

89. The Fossil Fuel Defendants—individually, and through API, other trade associations, and various front groups—mounted a public campaign of deception 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.

90. In addition to casting doubt on climate science and concealing their own internal research on climate change, Defendants also funded misleading studies on the economic consequences of reducing fossil fuel use. Beginning in the early 1990s, API hired economic consultants at Charles River Associates to conduct studies on the costs of mitigating global warming, then presented the results of those studies as independent research. One such study, published in 1997, found that keeping GHG emissions at 1990 levels would reduce economic growth by one to three percent every year, ultimately resulting in an annual drop in gross domestic product of $105 billion in 2010, and $460 billion in 2030. This study was widely publicized, without any acknowledgment that API had funded the study. Mobil (Exxon) cited the study in advertorials in *The New York Times*, API's executive vice president William O'Keefe cited the study in testimony before Congress, and a United States Senator cited the study in a resolution to block any treaty that could result from the upcoming meeting on the United Nations Framework Convention on Climate Change in Kyoto. One of the study's authors has since disclosed that the models used in the 1997 study (and other Charles River Associates studies funded by API) ignored the benefits of reducing GHG emissions, such as avoiding warming or improving air quality.[92]

91. One of the key organizations formed by the Fossil Fuel Defendants to coordinate the fossil fuel industry's response to the world's growing awareness of climate change was the

[91] *Ibid*.; Supran and Oreskes, *Addendum to 'Assessing ExxonMobil's Climate Change Communications (1977–2014)* (2020) 15(11) Environmental Research Letters, available at https://iopscience.iop.org/article/10.1088/1748-9326/aa815f/pdf (as of June 5, 2024).

[92] Franta, *Weaponizing economics: Big Oil, economic consultants, and climate policy delay* (2022) 31(4) Environmental Politics 555, 562-564, 568, available at https://www.tandfonline.com/doi/full/10.1080/09644016.2021.1947636 (as of June 5, 2024).

International Petroleum Industry Environmental Conservation Association (IPIECA). In 1988, the IPIECA formed a "Working Group on Global Climate Change" chaired by Duane LeVine, Exxon's manager for science and strategy development. The Working Group also included Brian Flannery from Exxon, Leonard Bernstein from Mobil, Terry Yosie from API, and representatives from BP, Shell, and Texaco (Chevron). In 1990, the Working Group sent a strategy memo created by LeVine to IPIECA member companies. This memo explained that, to forestall a global shift away from burning fossil fuels for energy, the industry should emphasize uncertainties in climate science, call for further research, and promote industry friendly policies that would leave the fossil fuel business intact.[93]

92. The GCC, on behalf of Defendants and other fossil fuel companies, also funded deceptive advertising campaigns and distributed misleading material to generate public uncertainty around the climate debate. By doing so, the GCC and Defendants sought to prevent U.S. adoption of a 1997 international agreement to limit and reduce GHG emissions known as the Kyoto Protocol and thereby inflate the market for fossil fuels and the revenues and profits for GCC members, including Defendants, despite the leading role that the U.S. had played in negotiating the Protocol.[94] The GCC's position on climate change contradicted decades of its members' internal scientific reports by asserting that natural trends, not human combustion of fossil fuels, were responsible for rising global temperatures:

> The GCC believes that the preponderance of the evidence indicates that most, if not all, of the observed warming is part of a natural warming trend which began approximately 400 years ago. If there is an anthropogenic component to this observed warming, the GCC believes that it must be very small and must be superimposed on a much larger natural warming trend.[95]

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[93] Bonneuil et al., *Early Warnings and Emerging Accountability: Total's Responses to Global Warming, 1971-2021* (2021) 71 Global Environmental Change, available at https://www.sciencedirect.com/science/article/pii/S0959378021001655 (as of June 5, 2024).

[94] Brulle, *Advocating Inaction: A Historical Analysis of the Global Climate Coalition* (2023) 32 Environmental Politics 2, 13-14, available at https://cssn.org/wp-content/uploads/2022/04/GCC-Paper.pdf (as of June 5, 2024). Brulle notes in particular the effectiveness of the GCC in opposing the Kyoto protocol: "In one final compliment, the GCC's effectiveness was acknowledged in a meeting with White House staff on 21 June 2001. The talking points for that meeting noted that 'POTUS rejected Kyoto, in part, based on input from you.'" (*Id*. at p. 15.)

[95] Global Climate Coalition, Global Climate Coalition: An Overview (Nov. 1996) p. 2, available at https://www.documentcloud.org/documents/5453339-1996-GCC-Overview-and-

93. The GCC's promotion of overt climate change skepticism also contravened its internal assessment that such theories lacked scientific support. Despite an internal primer acknowledging 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,"[96] the GCC excluded this section from the publicly released version of the backgrounder,[97] and instead funded and promoted some of those same contrarian theories. Between 1989 and 1998, the GCC spent $13 million on advertisements as part of a campaign to obfuscate the facts and the science relating to climate change and undermine the public's trust in climate scientists.[98] Ultimately, the GCC's efforts "created an influential discourse of climate skepticism in the U.S. that continues to be an influential political current."[99]

94. 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," so "there is no basis for the design of effective policy actions that would eliminate the potential for climate change."[100] 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

Reports (as of June 5, 2024).

[96] Dana, Association of International Automobile Manufacturers, memorandum to AIAM Technical Committee, Global Climate Coalition (GCC) re Primer on Climate Change Science - Final Draft (Jan. 18, 1996) p. 16, available at http://www.webcitation.org/6FyqHawb9 (as of June 5, 2024).

[97] See Dana, Association of International Automobile Manufacturers, memorandum to AIAM Technical Committee, Global Climate Coalition (GCC) re Science and Technology Assessment Committee (STAC) Meeting – February 15, 1996 – Summary (Feb. 27, 1996) p. 7, available at https://www.documentcloud.org/documents/5631461-AIAM-050835.html (as of June 5, 2024) ("Most suggestions [at the STAC meeting] had been to drop the 'contrarian' part. This idea was accepted and that portion of the paper will be dropped.").

[98] Franz, Kennedy School of Government, Harvard University, *Science, Skeptics and Non-State Actors in the Greenhouse* (Sept. 1998) ENRP Discussion Paper E-98-18, p. 13, available at https://www.belfercenter.org/sites/default/files/legacy/files/Science%20Skeptics%20and%20Non-State%20Actors%20in%20the%20Greenhouse%20-%20E-98-18.pdf (as of June 5, 2024).

[99] Boon, *A Climate of Change? The Oil Industry and Decarbonization in Historical Perspective* (2019) 93 Bus. History Rev. 101, 110.

[100] GCC, Issues and Options: Potential Global Climate Change (1994), preface & p. 43, available at https://www.documentcloud.org/documents/5628164-Potential-Global-Climate-Change-Issues-and-Options (as of June 5, 2024).

atmosphere during the next 100 years, there remains no scientific evidence that such a dangerous warming will actually occur."[101]

95. In 1997, William O'Keefe, chairman of the GCC and executive vice president of API, made the following false statement in a Washington Post op-ed: "Climate scientists don't say that burning oil, gas, and coal is steadily warming the earth."[102] This statement contradicted the established scientific consensus as well as Defendants' own knowledge. Yet Defendants did nothing to correct the public record, and instead continued to fund the GCC's anti-scientific climate skepticism.

96. In addition to publicly spreading false and misleading information about the climate science consensus, the GCC also sought to undermine credible climate science from within the IPCC. After becoming a reviewer of IPCC's Second Assessment Report in 1996, the GCC used its position to accuse the lead author of a key chapter in the Report of modifying the chapter's conclusions. The GCC claimed that the author, climatologist Ben Santer, had engaged in "scientific cleansing" that "understate[d] uncertainties about climate change causes and effects . . . to increase the apparent scientific support for attribution of changes to climate to human activities."[103] The GCC also arranged to spread the accusation among legislators, reporters, and scientists, and similar accusations were published in a *Wall Street Journal* op-ed.[104]

[101] GCC, Climate Change: Your Passport to the Facts (1995), available at https://www.documentcloud.org/documents/5628109-Climate-Change-Your-Passport-to-the-Facts (as of June 5, 2024).

[102] O'Keefe, *A Climate Policy*, The Washington Post (July 5, 1997), available at https://www.washingtonpost.com/archive/opinions/1997/07/05/a-climate-policy/6a11899a-c020-4d59-a185-b0e7eebf19cc/ (as of June 5, 2024).

[103] Franz, Kennedy School of Government, Harvard University, *Science, Skeptics and Non-State Actors in the Greenhouse* (Sept. 1998) ENRP Discussion Paper E-98-18, p. 14, available at https://www.belfercenter.org/sites/default/files/legacy/files/Science%20Skeptics%20and%20Non-State%20Actors%20in%20the%20Greenhouse%20-%20E-98-18.pdf (as of June 5, 2024).

[104] Oreskes and Conway, Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming (2011) p. 207. See also Singer, *Climate Change and Consensus*, 271 Science no. 5249 (Feb. 2, 1996); Seitz, *A Major Deception on 'Global Warming'*, Wall Street Journal (June 12, 1996), available at https://www.wsj.com/articles/SB834512411338954000 (as of June 5, 2024).

This effort "was widely perceived to be an attempt on the part of the GCC to undermine the credibility of the IPCC."[105]

97. In the late 1990s, Defendants shifted away from openly denying anthropogenic warming and toward peddling a subtler form of climate change skepticism. Defendants became alarmed by the enormous legal judgments the tobacco industry then faced as a result of decades spent publicly denying the health risks of smoking cigarettes; a Shell employee explained that the company "didn't want to fall into the same trap as the tobacco companies who have become trapped in all their lies."[106] Defendants began to shift their communications strategy, claiming they had accepted climate science all along.[107] Several large fossil fuel companies, including BP and Shell, left the GCC (although all the Fossil Fuel Defendants remained members of API).[108] At this point in time, Defendants publicly claimed to accept the reality of anthropogenic climate change, while insisting that the costs of climate action were unacceptably high in light of the allegedly yet-unresolved uncertainties in climate science—especially around the severity and timeframe of future climate impacts. Reflecting this new strategy, API Executive Vice President (and GCC chairman) William O'Keefe announced in November 1998 that "[w]e are committed to being part of the solution to the climate risk and to active participation in the debate to forge a clear, defensible policy." "[T]he debate is not about action or inaction," O'Keefe wrote, "but what set of actions is consistent with our state of knowledge and economic well-being."[109] Rather than publicly deny the need to address climate change, Defendants' new communications strategy sought to forestall policy actions that might decrease consumption of fossil fuel products and therefore threaten Defendants' revenues and profits.

98. Despite their public about-face, Defendants surreptitiously continued to organize and fund programs designed to deceive the public about the weight and veracity of the climate science

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[105] Franz, Science, Skeptics, and Non-State Actors in the Greenhouse, *supra*, p. 15.
[106] Rich, Losing Earth: A Recent History (2020) p. 186.
[107] Bonneuil et al., *Early Warnings and Emerging Accountability: Total's Responses to Global Warming, 1971-2021* (2021) 71 Global Envtl. Change 6, available at https://www.sciencedirect.com/science/article/pii/S0959378021001655 (as of June 5, 2024).
[108] *Ibid*.
[109] API, *U.S. Oil Industry Recognizes Climate Change Risk*, 28 Oil & Gas Journal (Nov. 1, 1998).

consensus. 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 a federal relations representative from Chevron. There were no climate scientists on the GCSCT. Steve Milloy and his organization, The Advancement of Sound Science Coalition (TASSC), were founding members of the GCSCT. TASSC was an organization created by the tobacco industry to give the impression of a "grassroots" movement, which aimed 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 had 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 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.

99. The GCSCT continued Defendants' efforts to deceive the public about the dangers of fossil fuel use by launching a campaign in 1998 to convince the public that the scientific basis for climate change was in doubt. The multi-million-dollar, multi-year "Global Climate Science Communications Action Plan" plan, sought, among other things, to do the following: (a) "[d]evelop and implement a national media relations program to inform the media about uncertainties in climate science"; (b) "generate national, regional and local media coverage on the scientific uncertainties"; (c) "[d]evelop a global climate science information kit for media including peer-reviewed papers that undercut the 'conventional wisdom' on climate science"; (d) "[p]roduce . . . a steady stream of op-ed columns"; and (e) "[d]evelop and implement a direct outreach program to inform and educate members of Congress, state officials, . . . and school teachers/students about uncertainties in climate science" to "begin to erect a barrier against further efforts to impose Kyoto [Protocol]-like measures in the future"[110]—a blatant attempt to disrupt international efforts to negotiate any treaty curbing GHG emissions and to ensure a

[110] Joe Walker, email to Global Climate Science Team re Draft Global Climate Science Communications Plan (Apr. 3, 1998), available at https://assets.documentcloud.org/documents/784572/api-global-climate-science-communications-plan.pdf (as of June 5, 2024).

continued and unimpeded market for, and profits from, Fossil Fuel Defendants' fossil fuel products.

100. Exxon, Chevron, and API directed and 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.'"[111] 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.

101. Soon after, API distributed a memo to its members illuminating API's and the 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 highest priority issue and defined as 'strategic.'"[112] The API memo stressed many of the strategies that Defendants collectively utilized to combat the perception of fossil fuel products as hazardous. These strategies included the following:

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 on the one hand, and, on the other, communications-oriented organizations and other groups carrying Defendants' message minimizing the hazards of the unabated use of fossil fuel products and opposing regulation thereof; and

c. Presenting Defendants' positions on climate change in domestic and international forums, including by presenting an "alternative" to the IPCC.

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[111] *Ibid*.

[112] Allegations of Political Interference with Government Climate Change Science, Hearing Before the Comm. on Oversight and Government Reform, 110th Cong. 324 (Mar. 19, 2007), available at https://www.govinfo.gov/content/pkg/CHRG-110hhrg37415/html/CHRG-110hhrg37415.htm (as of June 5, 2024).

102. In furtherance of the strategies described in these memoranda, Defendants made misleading statements about climate change, the relationship between climate change and 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 in California, including national publications such as *The New York Times*, *The Wall Street Journal*, and *The Washington Post*.

103. Another key strategy in Defendants' efforts to discredit the scientific consensus on climate change as well as the IPCC itself was to fund scientists who held fringe opinions. Those scientists obtained part or all of their research budget from the Fossil Fuel Defendants, either directly or through Fossil Fuel Defendant-funded organizations like API,[113] but frequently failed to disclose their funding sources.[114] At least one such scientist, Dr. Wei-Hock Soon, took the highly unusual approach of contractually agreeing to allow donors to review his research before publication, and his housing institution, the Smithsonian Institute, agreed not to disclose the funding arrangement without prior permission from his fossil fuel donors.[115] Defendants intended for the research of scientists they funded to be distributed to and relied on by consumers when buying Fossil Fuel Defendants' products, including by consumers in California.

104. Creating a false perception of disagreement in the scientific community (despite the consensus previously acknowledged within the industry) has evidently disrupted vital channels of communication between scientists and the public. A 2007 Yale University-Gallup poll found that while 71% of Americans personally believed global warming was happening, only 48% believed that there was a consensus among the scientific community, and 40% believed, falsely, that there

[113] E.g., Soon and Baliunas, *Proxy Climatic and Environmental Changes of the Past 1000 Years,* (Jan. 31, 2003) 23 Climate Rsch. 88, 105, available at https://www.int-res.com/articles/cr2003/23/c023p089.pdf (as of June 5, 2024).

[114] Allman, *Climate Change Researcher Received Funds From Fossil Fuel Industry* (Feb. 26, 2015) Smithsonian Magazine, available at https://www.smithsonianmag.com/smithsonianmag/smithsonian-climate-change-scientist-180954380/ (as of June 5, 2024).

[115] Mulvey et al., Union of Concerned Scientists, The Climate Deception Dossiers: Internal Fossil Fuel Industry Memos Reveal Decades of Disinformation, Climate Deception Dossiers #1: Dr. Wei-Hock Soon's Smithsonian Contracts (July 2015) pp. 6-9, available at https://www.ucsusa.org/sites/default/files/attach/2015/07/The-Climate-Deception-Dossiers.pdf (as of June 5, 2024).

was substantial disagreement among scientists over whether global warming was occurring.[116] Eight years later, a 2015 Yale-George Mason University poll found that "[o]nly about one in ten Americans understands that nearly all climate scientists (over 90%) are convinced that human-caused global warming is happening, and just half . . . believe a majority do."[117] Further, it found that 33% of Americans believe that climate change is mostly due to natural changes in the environment, in stark contrast to the 97% of peer-reviewed climate science papers that acknowledge that global warming is happening and at least partly human-caused.[118] The lack of progress, and indeed the regression, in the public's understanding of climate science over this period—during which Defendants professed to accept the conclusions of mainstream climate science while at the same time promoting a false, contradictory narrative—demonstrates the success of Defendants' deception campaign in thwarting the dissemination of accurate scientific information to the public regarding the effects of the use of fossil fuels.

105. Defendants, individually, collectively, and through their trade association memberships, worked directly, and often in a deliberately obscured manner, to conceal and misrepresent fossil fuel products' known dangers from consumers, the public, and the State.

106. Defendants have funded dozens of think tanks, front groups, and "dark money" foundations—i.e., organizations that raise funds to influence elections while concealing their contributions to political candidates or causes, and the sources of their contributions—promoting climate change denial. These organizations include the Competitive Enterprise Institute, the Heartland Institute, Frontiers of Freedom, Committee for a Constructive Tomorrow, and the Heritage Foundation. According to the Union of Concerned Scientists, from 1998 to 2017, Exxon spent over $36 million funding numerous organizations misrepresenting the scientific

[116] American Opinions on Global Warming: A Yale/Gallup/Clearvision Poll, Yale Program on Climate Change Communication (July 31, 2007), available at https://climatecommunication.yale.edu/publications/american-opinions-on-global-warming/ (as of June 5, 2024).

[117] Leiserowitz et al., Program on Climate Change Communication, Yale University, and Center for Climate Change Communication, George Mason University, Climate Change in the American Mind (Oct. 2015), available at https://climatecommunication.yale.edu/wp-content/uploads/2015/11/Climate-Change-American-Mind-October-20151.pdf (as of June 5, 2024).

[118] *Ibid*.

consensus[119] that fossil fuel products were causing climate change, sea level rise, and injuries to California, among other communities. Several Defendants have been linked to other groups that undermine the scientific basis linking fossil fuel products to climate change and sea level rise, including the Frontiers of Freedom Institute and the George C. Marshall Institute.

107. Beginning in 2015, journalists began to uncover mounting evidence of Defendants' campaign of deception. In September 2015, journalists at *Inside Climate News* reported that, as far back as the 1970s, Exxon had had sophisticated knowledge of the causes and consequences of climate change and of the role its products played in contributing to climate change.[120]

108. 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, as far back as the 1970s, Exxon and other members of the fossil fuel industry had had superior knowledge of the causes and consequences of climate change and the role their products played in causing it.[121]

109. In November 2017, the Center for International Environmental Law issued a report revealing that Defendants, including API, had had superior knowledge of the causes and consequences of climate change and the role fossil fuel products played in causing it as early as the 1970s.[122]

[119] Union of Concerned Scientists, ExxonMobil Foundation & Corporate Giving to Climate Change Denier & Obstructionist Organizations (1998-2017), available at https://www.ucsusa.org/sites/default/files/attach/2019/ExxonMobil-Worldwide-Giving-1998-2017.pdf (as of June 5, 2024).

[120] Banerjee et al., *Exxon: The Road Not Taken*, Inside Climate News (Sept. 16, 2015), available at https://insideclimatenews.org/project/exxon-the-road-not-taken/ (as of June 5, 2024).

[121] The Los Angeles Times published a series of three articles between October and December 2015. (See Jennings et al., *How Exxon Went From Leader to Skeptic on Climate Change Research*, Los Angeles Times (Oct. 23, 2015), available at https://graphics.latimes.com/exxon-research (as of June 5, 2024); Jerving et al., *What Exxon Knew About the Earth's Melting Arctic*, Los Angeles Times (Oct. 9, 2015), available at https://graphics.latimes.com/exxon-arctic/ (as of June 5, 2024); Lieberman and Rust et al., *Big Oil Braced for Global Warming While it Fought Regulations*, Los Angeles Times (Dec. 31, 2015), available at https://graphics.latimes.com/oil-operations (as of June 5, 2024)).

[122] Muffett and Feit, Smoke and Fumes: The Legal and Evidentiary Basis for Holding Big Oil Accountable for the Climate Crisis, Center for International Environmental Law (2017), available at https://www.ciel.org/reports/smoke-and-fumes (as of June 5, 2024).

D. Defendants Could Have Chosen to Facilitate, and Be Part of, a Lower-Carbon Future, but Instead Chose Corporate Profits and Continued Deception

110. Defendants could have chosen a different path. Defendants could have refrained from undermining the global effort to mitigate the impacts of GHG emissions, or contributed to it by, for example, delineating practical technical strategies, policy goals, and regulatory structures that would have allowed them to continue their business ventures while reducing GHG emissions and supporting a transition to a lower-carbon future. Defendants' own internal documents from as early as the 1970s detailed alternative low-carbon pathways that would reduce GHG emissions by reducing fossil fuel production and use, and developing non-fossil energy sources. Instead, Defendants devoted significant efforts to deceiving consumers, lawmakers, and the public about the existential hazards of burning fossil fuels—all with the purpose and effect of perpetuating and inflating usage of fossil fuels, and therefore Defendants' revenues and profits, and delaying the advent of alternative energy sources not based on fossil fuels.

111. As a result of Defendants' tortious, deceptive, and misleading conduct, consumers of Defendants' fossil fuel products, the public, and policymakers, in California as elsewhere, have been deliberately and unnecessarily deceived about the following: the role of fossil fuel products in causing global warming, sea level rise, disruptions to the hydrologic cycle, more extreme precipitation, heat waves, droughts, and other consequences of the climate crisis; the acceleration of global warming since the mid-twentieth century; and the fact that continued increases in fossil fuel consumption create increasingly severe environmental threats and increasingly significant economic costs for coastal and other communities in California. Consumers, the public, and policymakers in California and elsewhere 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 regarding the role of fossil fuels in causing both climate change and a wide range of potentially destructive impacts.

112. Defendants' deception also significantly delayed the transition to alternative energy sources that could have prevented some of the worst impacts of climate change in California.

Exxon had long forecasted—and other Defendants were aware—that alternative energy sources could have penetrated half of a competitive energy market in 50 years if allowed to develop unimpeded. However, by sowing doubt about the future consequences of unrestricted fossil fuel consumption, Defendants' deception campaign successfully forestalled development and dissemination of alternative fuels, as well as legislation supporting a broad-based transition to alternative energy sources. This delay resulted in tremendous revenues and profits to Defendants, and led to emission of huge amounts of avoidable greenhouse gases, thereby ensuring that the damage caused by climate change will be substantially more severe than if Defendants had acted in a manner commensurate with their internal knowledge of climate risks.

E. Defendants' Internal Actions Demonstrate Their Awareness of the Impacts of Climate Change and Their Intent to Continue to Profit from the Unabated Use of Fossil Fuel Products

113. In contrast to their public-facing efforts challenging the validity of the scientific consensus about anthropogenic climate change, the Fossil Fuel Defendants' acts and omissions since the 1970s—including taking expensive actions to protect their own investments from the impacts of climate change—have evinced their clear understanding of the realities of climate change and its likely consequences. These actions have included making multi-billion-dollar infrastructure investments for their own operations, including, among others, the following: raising offshore oil platforms to protect against sea level rise; reinforcing offshore oil platforms to withstand increased wave strength and storm severity; and developing technology and infrastructure to extract, store, and transport fossil fuels in a warming Arctic environment.[123]

114. For example, oil and gas reserves in the Arctic that were not previously reachable due to sea ice are becoming increasingly reachable as sea ice thins and melts due to climate change.[124] In 1973, Exxon obtained a patent for a cargo vessel, such as a tank ship, capable of breaking

[123] Lieberman and Rust, *Big Oil braced for global warming while it fought regulations*, Los Angeles Times (Dec. 31, 2015), available at https://graphics.latimes.com/oil-operations (as of June 5, 2024).

[124] Henderson and Loe, *The Prospects and Challenges for Arctic Oil Development*, Oxford Institute for Energy Studies (Nov. 2014) p. 1, available at https://www.oxfordenergy.org/publications/the-prospects-and-challenges-for-arctic-oil-development/ (as of June 5, 2024).

through sea ice for use in Arctic operations[125] and for an oil tanker[126] designed for Arctic operations.

115. Similarly, in 1974, Texaco (Chevron) obtained a patent for a mobile Arctic drilling platform designed to withstand significant interference from lateral ice masses.[127]

116. Shell obtained a patent for an Arctic offshore platform adapted for conducting operations in the Beaufort Sea in 1984.[128]

117. 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 added substantial costs to the project.[129]

a. In 1979, Norske Shell was approved by Norwegian oil and gas regulators to operate a portion of the Troll oil and gas 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.

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

[125] ExxonMobil Research Engineering Co., Patent US3727571A: Icebreaking cargo vessel (granted Apr. 17, 1973), available at https://www.google.com/patents/US3727571 (as of June 5, 2024).

[126] ExxonMobil Research Engineering Co., Patent US3745960A: Tanker vessel (granted July 17, 1973), available at https://www.google.com/patents/US3745960 (as of June 5, 2024).

[127] Texaco Inc., Patent US3793840A: Mobile, arctic drilling and production platform (granted Feb. 26, 1974), available at https://www.google.com/patents/US3793840 (as of June 5, 2024).

[128] Shell Oil Co., Patent US4427320A: Arctic offshore platform (granted Jan. 24, 1984), available at https://www.google.com/patents/US4427320 (as of June 5, 2024).

[129] *Greenhouse Effect: Shell Anticipates a Sea Change*, N.Y. Times (Dec. 20, 1989), available at https://www.nytimes.com/1989/12/20/business/greenhouse-effect-shell-anticipates-a-sea-change.html; Lieberman and Rust, *Big Oil Braced for Global Warming While it Fought Regulations*, L.A. Times (Dec. 31, 2015), available at https://graphics.latimes.com/oil-operations (as of June 5, 2024).

d. In 1989, Shell engineers revised their plans to increase the above-water height of the platform by three to six feet in order to account for higher anticipated average sea levels and increased storm intensities due to global warming over the platform's 70-year operational life.[130]

e. Shell projected that the additional three to six feet of above-water construction would increase the cost of the Troll A platform by tens of millions of dollars.

F. Defendants' Actions Have Slowed the Development of Alternative Energy Sources and Exacerbated the Costs of Adapting to and Mitigating the Adverse Impacts of the Climate Crisis

118. As GHG pollution accumulates in the atmosphere, some of which (namely CO_2) does not dissipate for potentially thousands of years, 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.

119. Delayed societal development and adoption of alternative energy sources and related efforts to curb anthropogenic GHG emissions have therefore increased environmental harms and increased the magnitude and cost to address harms, including to California, that have already occurred or are locked in as a result of historical emissions.

120. Therefore, Defendants' campaign to obscure the science of climate change to protect and expand the use of fossil fuels greatly increased and continues to increase the injuries suffered by California and its residents. Had concerted action to reduce GHG emissions begun earlier, the subsequent impacts of climate change could have been avoided or mitigated.

121. Defendants have been aware for decades that clean energy presents a feasible alternative to fossil fuels. In 1980, Exxon forecasted that non-fossil fuel energy sources, if pursued, could penetrate half of a competitive energy market in approximately 50 years.[131] This internal estimate was based on extensive modeling within the academic community, including

[130] *Ibid.*

[131] Shaw and McCall, Exxon Research and Engineering Company's Technological Forecast: CO_2 Greenhouse Effect (Dec. 18, 1980) p. 5, available at https://www.climatefiles.com/exxonmobil/1980-exxon-memo-on-the-co2-greenhouse-effect-and-current-programs-studying-the-issue/ (as of June 5, 2024).

research conducted by the Massachusetts Institute of Technology's David Rose, which concluded that a transition to non-fossil energy could be achieved in around 50 years. Exxon circulated an internal memo approving of Rose's conclusions, stating they were "based on reasonable assumptions."[132] But instead of pursuing a clean energy transition or warning the public about the dangers of burning fossil fuels, Defendants chose to deceive consumers to preserve Fossil Fuel Defendants' profits and assets. As a result, much time has been lost in which consumers and policymakers could have done much to mitigate the climate crisis in California.

122. 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 Chief Executive for BP America, at Stanford University, Browne described Defendants' and the entire fossil fuel industry's responsibility and opportunity to reduce the use of fossil fuel products, reduce global CO_2 emissions, and mitigate the harms associated with the use and consumption of such products:

> [W]e 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.
>
> . . . .
>
> 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.[133]

[132] Exxon Research and Engineering Company, Coordination and Planning Division, CO_2 Greenhouse Effect: A Technical Review (Apr. 1, 1982) pp. 17-18, available at https://www.climatefiles.com/exxonmobil/1982-memo-to-exxon-management-about-co2-greenhouse-effect/ (as of June 5, 2024).

[133] John Browne, Group Executive for BP America, BP Climate Change Speech to Stanford (May 19, 1997), available at http://www.climatefiles.com/bp/bp-climate-change-speech-to-stanford (as of June 5, 2024).

123. Despite Defendants' knowledge of the foreseeable, measurable, and significant harms associated with the unrestrained consumption and use of fossil fuel products, in California 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 promote heavy fossil fuel use, and mounted a campaign to obscure the connection between fossil fuel products and the climate crisis, thus dramatically adding to the costs of abatement. (See *supra*, Section IV.C.) This campaign was intended to, and did, reach and influence California consumers, along with consumers elsewhere.

124. At all relevant times, Defendants were deeply familiar with opportunities to reduce the use of fossil fuel products and associated GHG emissions, mitigate the harms associated with the use and consumption of these products, and promote development of alternative, clean energy sources. Examples of that recognition date back to the 1960s, and include, but are not limited to, the following:

a. In 1980, Imperial Oil (Exxon) 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 gases but removal of only 50% of the CO_2 would double the cost of power generation."[134]

b. A 1987 company briefing produced by Shell on "Synthetic Fuels and Renewable Energy" emphasized the importance of immediate research and development of alternative fuel sources, noting that "the task of replacing oil resources is likely to become increasingly difficult and expensive and there will be a growing need to develop clean, convenient alternatives. . . . New energy sources take decades to make a major global contribution. Sustained commitment is therefore needed during the remainder of this century to

[134] Imperial Oil Ltd., Review of Environmental Protection Activities for 1978–1979 (Aug. 6, 1980) p. 2, available at https://www.climatefiles.com/exxonmobil/1980-imperial-oil-review-of-environmental-protection-activities-for-1978-1979/ (as of June 5, 2024).

ensure that new technologies and those currently at a relatively early stage of development are available to meet energy needs in the next century."[135]

c. A 1989 article in a publication from Exxon Corporate Research for company use only stated: "CO_2 emissions contribute about half the forcing leading to a potential enhancement of the Greenhouse Effect. Since energy generation from fossil fuels dominates modern CO_2 emissions, strategies to limit CO_2 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."[136]

125. Despite these repeated recognitions of opportunities to reduce emissions and mitigate corresponding harms from climate change, Defendants continued to sow doubt and disinformation in the minds of the public regarding the causes and effects of climate change, and methods of reducing emissions. Examples of those efforts include, but are not limited to, the following:

a. In 1996, more than 30 years after API's president told petroleum industry leaders that carbon emissions from fossil fuels could "cause marked changes in climate" by the year 2000 if not abated,[137] API published the book *Reinventing Energy: Making the Right Choices* to refute this very conclusion. Contradicting the scientific consensus of which its members had been aware for decades, the book claims: "Currently, **no** conclusive—or even strongly suggestive—scientific evidence exists that human activities are significantly affecting sea levels, rainfall, surface temperatures, or the intensity and frequency of storms."[138] The book

[135] Shell Briefing Service, *Synthetic Fuels and Renewable Energy*, Shell Service Briefing, No. 2 (1987), available at https://www.climatefiles.com/shell/1987-shell-synthetic-fuels-renewable-energy-briefing/ (as of June 5, 2024).

[136] Flannery, Greenhouse Science, Connections: Corporate Research, Exxon Research and Engineering Company (Fall 1989), available at https://www.climatefiles.com/exxonmobil/1989-exxon-mobil-article-technologys-place-marketing-mix/ (as of June 5, 2024).

[137] Ikard, *Meeting the Challenges of 1966*, in Proceedings of the American Petroleum Institute (1965) p. 13, available at https://www.documentcloud.org/documents/5348130-1965-API-Proceedings (as of June 5, 2024).

[138] American Petroleum Institute, Reinventing Energy: Making the Right Choices (1996)

also suggested 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.[139]

b. In the publication, API also contended that "[t]he state of the environment does not justify the call for the radical lifestyle changes Americans 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. "[A]lternatives 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. This in turn will . . . cost jobs."[140]

c. API published this book to ensure 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 reductions in greenhouse gas emissions by the United States, or even all developed countries, would impose large costs on those countries but yield little in the way of benefits—even under drastic climate change scenarios."[141]

d. From at least 2005 to 2016, Exxon executives strategized in internal communications about how to diminish concerns about climate change and muddle scientific findings that might hurt the company's fossil fuel business.[142]

126. The Fossil Fuel Defendants could have made major inroads towards mitigating the harms they caused, and in particular, the State's injuries, by developing and employing technologies to capture and sequester GHG emissions associated with conventional use of their

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p. 79 (emphasis in original), available at https://www.climatefiles.com/trade-group/american-petroleum-institute/1996-reinventing-energy/ (as of June 5, 2024).

[139] *Id*. at pp. 85-87.

[140] *Id*. at pp. 59, 68, 69.

[141] *Id*. at p. 89.

[142] Matthews and Eaton, *Inside Exxon's Strategy to Downplay Climate Change*, Wall Street Journal (Sept. 14, 2023), available at https://www.wsj.com/business/energy-oil/exxon-climate-change-documents-e2e9e6af (as of June 5, 2024).

fossil fuel products. The Fossil Fuel Defendants had knowledge of these technologies dating back at least to the 1960s, and, had indeed, internally researched many such technologies.

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

a. Refraining from affirmative efforts, whether directly, through coalitions, or through front groups, to distort public debate, manipulate public perception and the public policy agenda, and cause many consumers, business, and political leaders to think the relevant science is far less certain than it actually is;

b. Acknowledging the validity of scientific evidence on anthropogenic climate change and the damages it will cause people, communities (including the State), and the environment. Disseminating that evidence would have changed the public policy agenda from determining whether to combat climate change to deciding how to combat it; avoided much of the public confusion that has ensued since at least 1988; and contributed to an earlier and quicker transition to cleaner energy sources in California that could help minimize catastrophic climatic consequences;

c. Forthrightly communicating with consumers, the public, regulators, shareholders, banks, insurers, and the State, and warning them about the global warming hazards of fossil fuel products that were known to Defendants, which would have enabled those groups to make informed decisions about whether to curb the use of these products—including whether and to what extent to invest in alternative clean energy sources instead of in fossil fuels;

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

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

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

128. Despite their knowledge of the foreseeable harms associated with the consumption of fossil fuel products, and despite the existence of, and the fossil fuel industry's knowledge of, opportunities to reduce the foreseeable dangers associated with those products, Defendants wrongfully promoted and concealed the hazards of using fossil fuel products, delaying meaningful development of alternative energy sources and exacerbating the costs of adapting to and mitigating the adverse impacts of the climate crisis, including the climate crisis in California.

G. Defendants Continue to Deceive California Consumers Through Misleading Advertisements That Portray Defendants as Climate-Friendly Energy Companies and Obscure Their Role in Causing Climate Change

129. Defendants' deceptive conduct continues to the present day, albeit through updated messaging. Now, rather than engaging in outright denials of the existence of climate change, Defendants deflect attention from their role in causing climate change by falsely portraying fossil fuel products and companies as environmentally friendly, climate-friendly, or otherwise less environmentally damaging than those products and companies really are.

130. Defendants have continued to mislead the public about the impact of fossil fuel products on climate change through "greenwashing." Through recent advertising campaigns and public statements in California and/or intended to reach California, including but not limited to online advertisements and social media posts, Defendants falsely and misleadingly portray these products as "green," and the Fossil Fuel Defendants portray themselves as climate-friendly energy companies that are deeply engaged in finding solutions to climate change. In reality, Fossil Fuel Defendants continue to primarily invest in, develop, promote, and profit from fossil fuel products and heavily market those products to consumers, with full knowledge that those products will continue to exacerbate climate change harms.

131. Defendants' greenwashing exploits California consumers' concerns about climate change and their desire to purchase "green" products and spend their consumer dollars on products and businesses that are taking substantial and effective measures to combat climate change. Defendants' false advertisements are likely to mislead California consumers by giving the impression that in purchasing the Fossil Fuel Defendants' fossil fuel products, consumers are supporting genuine, substantial, and effective measures to mitigate climate change through these companies' alleged investments in clean energy. Defendants' greenwashing ultimately attempts to persuade California consumers to support Defendants' purported attempts to contribute to climate change solutions by purchasing and consuming these products, including the Fossil Fuel Defendants' fossil fuel products, thereby contributing to Defendants' revenues and profits by misleading consumers.

132. Below are representative examples of Defendants' greenwashing campaigns.

1. Defendants' Affirmative Promotion of Fossil Fuel Products as "Green," "Clean," or Otherwise Good for the Environment Is Likely to Mislead California Consumers About How Use of Those Fossil Fuel Products Leads to Climate Change

133. At all times relevant to this complaint, Defendants have promoted certain of the Fossil Fuel Defendants' fossil fuel products as environmentally beneficial, when in fact those products continue to contribute to climate change, and thus imperil the environment, if used as intended. These products, which Defendants tout as "green," "clean" and/or "cleaner," and/or "environmentally friendly," in fact result in the increase of GHG emissions, despite Defendants' knowledge that, when used as designed and intended, these products lead to climate change.

134. Defendants' advertisements capitalize on California consumers' concern over environmental degradation. Because of a growing collective realization of past environmental damage and increasingly severe current and anticipated future climate change harms, consumers more often seek to buy products that they believe will not contribute to further injury to the environment. By portraying fossil fuel products as environmentally friendly, and with words, phrases, colors, and imagery that evoke positive environmental attributes, these advertisements present fossil fuel products as beneficial to the environment. Reasonable consumers are likely to

be misled by Defendants' advertisements into believing that these products do not contribute to substantial injury to the environment. However, these supposedly environmentally friendly fossil fuel products, through increased GHG emissions, contribute to the sweeping environmental degradation caused by climate change—just as other fossil fuel products do. By promoting fossil fuel products as environmentally beneficial, Defendants exploit concerned consumers' goodwill and mislead them into purchasing products that they believe will be part of the solution, even though Defendants are aware that these products only exacerbate the problem.

135. Defendants' marketing of fossil fuel products as environmentally beneficial follows in the footsteps of the tobacco industry's advertising campaigns to de-emphasize, and confuse the public about, the deadly effects of smoking cigarettes. Just as tobacco companies promoted "low-tar" and "light" cigarettes, inducing consumers to think of them as healthy alternatives to quitting smoking, while knowing that smoking "healthy" cigarettes was still harmful to human health, so too do Defendants peddle "low-carbon" and "emissions-reducing" fossil fuel products to persuade consumers that those products are climate-friendly alternatives to traditional fossil fuels. In reality, the fossil fuel products they describe as "low-carbon," "clean" and/or "cleaner," "green," and "emissions-reducing" in fact contribute to climate change and are harmful to the health of the planet and its people.

136. Below are representative examples of the Fossil Fuel Defendants' advertisements to California consumers that misleadingly portray fossil fuels as environmentally beneficial or benign and fail to mention the products' role in causing environmentally injurious climate change. The emphasis on lower emissions, "cleaning" terminology, and positive environmental imagery and messaging—individually and together—in Defendants' advertisements are likely to mislead reasonable consumers by suggesting that Defendants' fuels are environmentally beneficial or benign when they contribute to climate change like any other fossil fuel product. The examples are representative of Defendants' other advertisements and public statements in Defendants' greater greenwashing strategy to confuse consumers about the consequences of using fossil fuel products and consequently to increase demand for—and profits from—those fossil fuel products.

a. Since at least 2016, Exxon has offered for sale and marketed its Synergy fossil fuels, including, since at least 2020, at a substantial number of Exxon-branded gas stations in California. In Exxon's advertisements for its Synergy fuels, including those on or near the gas pumps at Exxon-branded gas stations in California, Exxon makes several claims that a reasonable consumer would understand to mean that the Synergy fuels are beneficial or benign, and not harmful, to the environment. For example, Exxon consistently promotes Synergy fuels as "clean" or "cleaner," and the company's climate strategy mentions its Synergy fuel, claiming it can help reduce GHG emissions. Exxon also cites Synergy's alleged reduction of CO_2 emissions in Exxon's advertisement of the company's improved environmental performance. An advertisement on Exxon's website, which is reproduced on the following page, includes an image featuring a bright sunrise in a clear sky over hills of green grass, green trees, and little to no industrial or urban development.

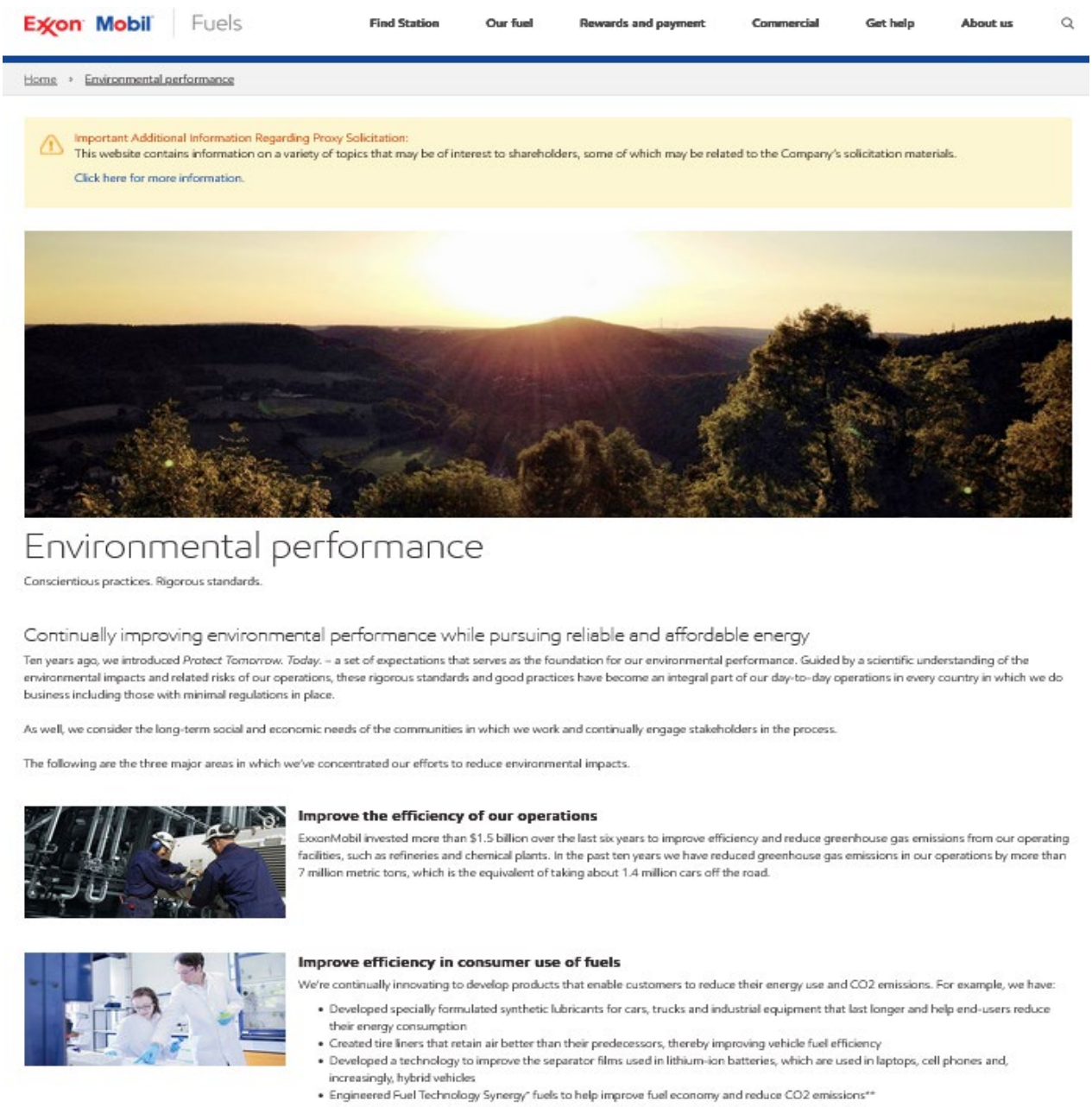


Figure 7: ExxonMobil Fuels "Environmental Performance" website

b. In addition to its Synergy fuels, Exxon offers for sale, and has marketed, Mobil 1™ ESP x2 motor oil to California consumers. From 2016 through at least 2022, Exxon promoted Mobil 1™ ESP x2 on the website *Energy Factor*—effectively a corporate blog for Exxon, in which Exxon claims to discuss developing safe and reliable energy sources for the future—in a post titled, "Green motor oil? ExxonMobil scientists deliver an unexpected solution." According to its advertisement of Mobil 1™ ESP x2, Exxon specially formulated the green oil to "contribute to [] carbon-emission reduction efforts." Exxon's advertising suggests to the consumer that

purchase and use of this motor oil conveys an environmental benefit, when in fact the opposite is true.

c. Shell also offers for sale and markets in California gasoline and oil products. Shell describes its products as "cleaning" and that their use "produces fewer emissions." Shell's repeated claim that its products are clean, and its frequent use of green and environmentally positive imagery in its marketing materials, individually and together, are likely to mislead reasonable consumers into believing that Shell's fuels are environmentally beneficial or benign, when in fact they are fossil fuels which, when used as designed and intended, contribute to climate change.

d. Similarly, Chevron's gasoline offered for sale and marketed in California, Chevron with Techron, is marketed as having "cleaning power" that minimizes emissions. Chevron's repeated emphasis on "cleaning" terminology, its focus in its marketing materials on "advancing a lower carbon future" and "ever-cleaner" energy, and its express solicitation of consumers who "care for the environment" are all likely to mislead reasonable consumers by suggesting that Chevron's fuels are environmentally beneficial or benign, when they are not.

e. Phillips 66, through its 76-branded gas stations in California, offers for sale and markets its 76-brand fossil fuels. In Phillips 66's advertisements for its 76-brand fuels, including advertisements on or near the pumps at 76-branded gas stations in California, Phillips 66 claims that its fuels "clean" a car's engine, resulting in "lower emissions, and that deposits left from other gasolines "can increase emissions." Phillips 66 advertises that 76's fossil fuels are "better for the environment." The 76 website for 76's fuels contains the marketing materials shown below, in which Phillips 66 makes the claim—superimposed on an image of a bluebird standing on a car's side mirror and looking at the viewer, with silhouetted trees in the background—that 76 and its fossil fuels align with the values of environmentally conscious consumers: "We're on the driver's side®. And the environment's."

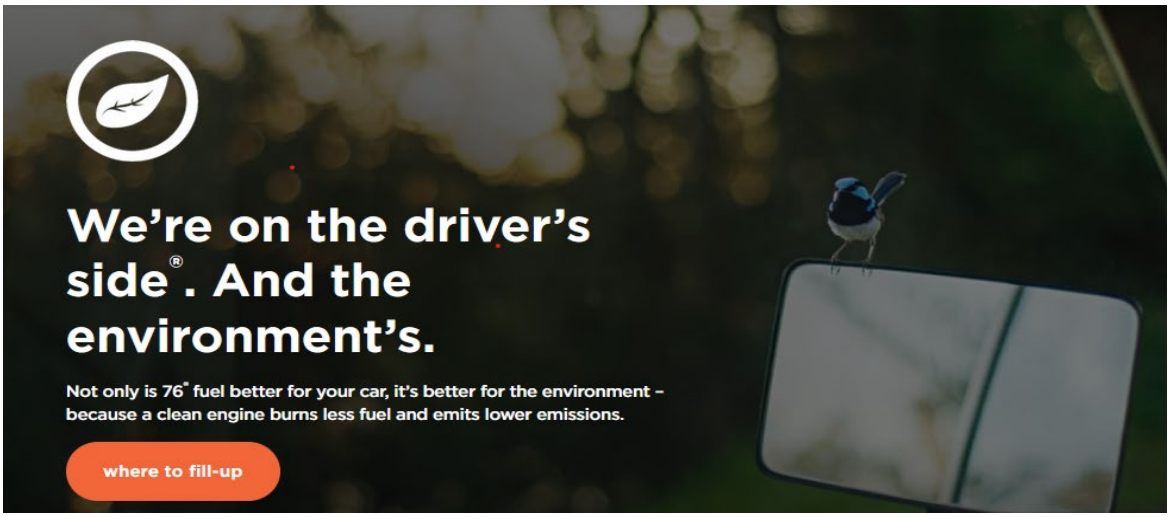


Figure 8: Phillips 66, 76 Fuels Website: Top Tier Gas

137. The Fossil Fuel Defendants also collectively promote their petroleum and natural gas products through Defendant API, which makes public statements and claims about oil and natural gas. These include advertisements and promotional campaign websites that have been directed at and/or reached California, which reasonable consumers would understand to mean that the Fossil Fuel Defendants' fossil fuels are beneficial or benign, not harmful, to the environment. In particular, API's marketing material falsely promotes the narrative that natural gas is an environmentally friendly fuel.

138. In several advertisements in *The Washington Post*—e.g., "Why natural gas will thrive in the age of renewables," "Real climate solutions won't happen without natural gas and oil," "Low- and no-carbon future starts with natural gas"—API has misleadingly touted natural gas as "part of the solution" to climate change. API claims natural gas is "clean." API also promotes natural gas's purported benefits through a campaign titled "Energy for a Cleaner Environment." As part of this campaign, API has offered on its website, in social media posts, and in other advertisements that have reached Californians, the image on the following page, of lush greenery and a message that "88% of Americans favor energy companies helping meet environmental challenges." API elaborates within the advertisement that "natural gas and oil [] powers and supports modern living . . . with lower emissions."

Figure 9: API, We Are America's Generation Energy

139. API further claims, falsely, that, "[n]atural gas is an economical, environmentally friendly complement to renewable energy. The sooner green activists realize that, the more effective they'll be at continuing to slash emissions." API's misleading messaging regarding the alleged environmental benefits of natural gas, coupled with its positive environmental imagery and messaging, is likely to mislead reasonable consumers by suggesting that fossil fuels, in particular natural gas, are environmentally beneficial and not harmful to the climate. In reality, the majority of natural gas is derived from fossil fuels, and its primary constituent is methane, a potent greenhouse gas which plays a significant role in accelerating climate change. Methane has a relatively short lifespan, but its global warming potential is approximately 28 times greater than an equivalent weight of carbon dioxide over a 100-year time period, and approximately 84 times greater than carbon dioxide over a 20-year timeframe. Accounting for methane leaks, flaring, and venting in production and supply chains, as well as combustion of natural gas, the net GHG

emissions of natural gas are on a par with—and sometimes higher than—the GHG emissions from coal combustion. Moreover, combustion of methane for use as a fuel emits carbon dioxide. Methane is the second largest component of GHG emissions in California, behind carbon dioxide.

2. Defendants' Affirmative Claims That They Contribute Substantially to Climate Change Solutions Are Likely to Mislead California Consumers

140. Recognizing a shift in consumer knowledge and understanding of climate change, Defendants have changed tactics from seeking to deceive the public about the science and reality of climate change to deceptively portraying themselves as part of the solution to climate change. The Fossil Fuel Defendants tout their climate-friendly investments in "clean" fuels and renewable energy, when in fact those investments are nonexistent or miniscule in comparison to the Fossil Fuel Defendants' investments in developing and expanding their fossil fuel production. In many cases, those "clean" fuels themselves contribute substantially to climate change. Defendants also market themselves as being in alignment with international goals to reduce GHG emissions, while instead working to grow the Fossil Fuel Defendants' fossil fuel businesses and increase profits generated from fossil fuel sales. Thus, Defendants' efforts to mislead the public about climate change have not stopped. Defendants have simply shifted gears to engage in a different form of deceptive conduct. In doing so, their marketing presents another lie to California consumers: that Defendants have made and are making substantial contributions to solving climate change.

141. By deceptively portraying themselves and their products as part of the climate solution, rather than as the problem, Defendants' advertisements induce consumers to purchase fossil fuel products and develop brand affinity under the misimpression that purchasing and using fossil fuels will somehow contribute to a "greener" energy future rather than contributing to climate change.

142. In reality, the Fossil Fuel Defendants' expansion of their fossil fuel businesses and insubstantial investments in non-GHG-emitting technology belie Defendants' purported commitments to solving climate change. The following are but a few examples of Defendants' attempts to falsely portray themselves as being aligned with solutions to the climate crisis, rather than continuing to be the problem.

143. Exxon misleadingly promotes itself to consumers as a "green" company through its alleged commitment to developing clean energy solutions. Exxon also has announced its ambition to achieve net-zero GHG emissions by 2050, and touts its commitment to helping society reach a lower-emissions future. Exxon has heavily promoted its investment in developing algae for use as a biofuel to reduce emissions and combat climate change. Exxon's advertising tells consumers that Exxon is working to decrease its carbon footprint and that its research is leading toward "A Greener Energy Future. Literally."

144. Exxon's investment in potential renewable fuels, such as biofuels, and in other potential lower-emission fuels and technologies, has been miniscule compared to its overall profits and to its investments in developing and expanding its fossil fuels business. For example, one analysis comparing Exxon's advertised goal of producing 10,000 barrels of biofuels per day by 2025 to Exxon's fossil fuel refinery operations found that the goal for biofuel production would amount to only 0.2% of Exxon's refinery capacity, as reported in 2019—in essence, a rounding error. Also, Exxon's advertisements touting the development of biofuels from plant waste substantially overplayed the likely environmental benefits by failing to acknowledge the intensive energy required to process that plant waste, which would create substantial additional GHG emissions. As of late 2022, Exxon quietly abandoned its investments in developing algae as a biofuel, but Exxon continues to invest in its development of fossil fuels, as it has done for decades.

145. Exxon's misleading advertisements have been published across California media outlets, among others. For example, in a video advertisement Exxon ran on *SFGate.com*[143] on at least November 3, 2020, Exxon claims: "In these **unprecedented times**, **the challenges** we face can seem daunting, but some things remain **unchanged**, like our commitment to providing **cleaner, reliable energy**." The video shows this image of sun peeking through the branches of a pristine forest, all superimposed on a background of bubbles rising through clear blue water, to represent Exxon's apparent "commitment" to clean energy:

[143] *SFGate.com* is a news website based in San Francisco, California, which was formerly the digital home of the *San Francisco Chronicle.*

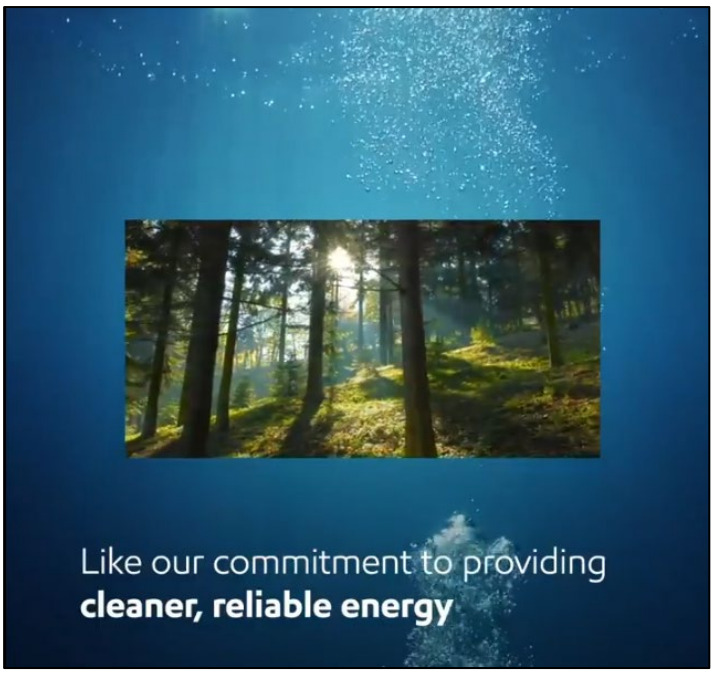


Figure 10: ExxonMobil November 3, 2020 *SFGate* Video Advertisement

146. As another example, in a video advertisement Exxon ran on *The Sacramento Bee*'s website in August 2021, a narrator asks the viewer to "imagine if 100 million metric tons of CO_2 could be captured and stored every year." The narrator then proclaims, "It's possible. ExxonMobil is working to advance climate solutions." The narrator does not explain that in 2021, Exxon's sales of fossil fuel products were responsible for 690 million metric tons of CO_2 emissions (much more than Exxon proposes to "capture"), or that, even if the plan at issue is approved and successful, 100 million metric tons would not be captured annually until 2040.

147. In a video posted on X (formerly Twitter) in 2022, Exxon states that it is the "first company to capture more than 120 million metric tons of CO_2." The company explains, "That's like taking all the cars in Texas, Arizona and California off the road – 26 million cars, gone for an entire year." The advertisement then states that removing 100 million metric tons of CO_2 would be "equivalent to planting a forest the size of California."

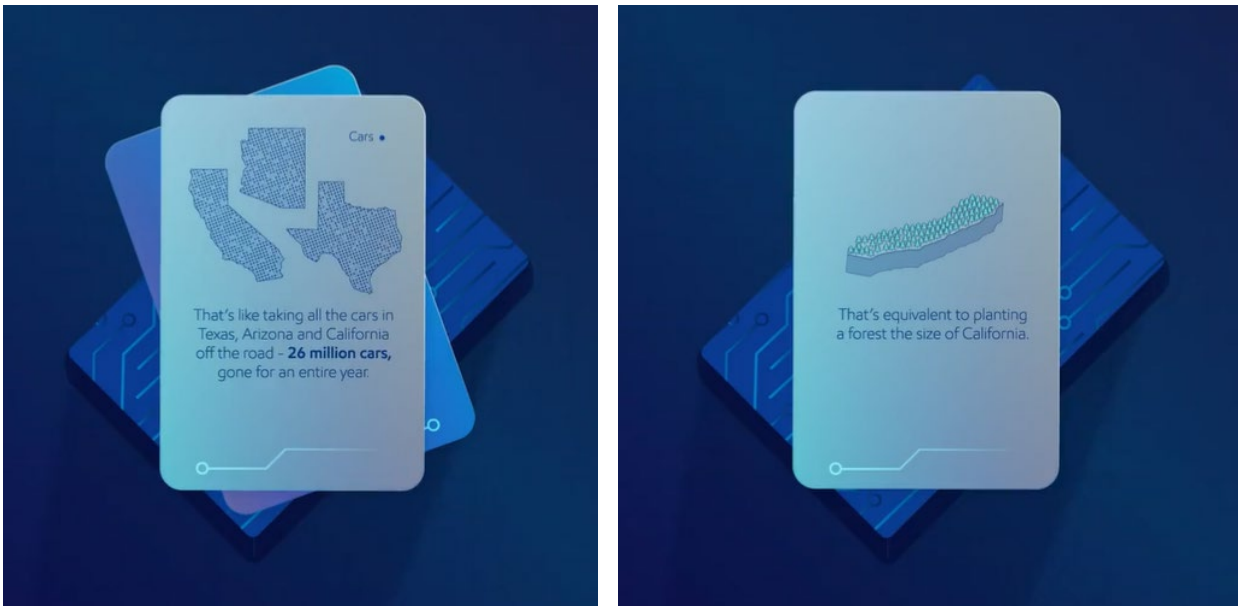


Figure 11: Exxon January 6, 2022 Social Media Advertisement (X, formerly Twitter)

Exxon's advertisement misleadingly implies that because of Exxon's carbon capture efforts, CO_2 emissions equivalent to more than all of the cars driven in California for a year are "gone." In fact, a significant amount of the captured CO_2 is used to extract more oil, which in turn produces more CO_2 emissions. Of the estimated 120 million metric tons of CO_2 captured at one of Exxon's facilities, reportedly 95% was used to extract more oil.

148. In another video advertisement on *The Sacramento Bee*'s website, Exxon proclaims that "risks associated with climate change must be managed" and then misleadingly asserts that "fracking is a proven and safe solution." The advertisement then directs the viewer to learn more at Exxchange.com, an Exxon website that falsely describes natural gas as "clean-burning." In this advertisement, Exxon fails to explain that the production and combustion of natural gas produces potent GHGs, like methane, that contribute to climate change, and that natural gas is far from a "clean" energy source, let alone a solution to climate change. To the contrary, natural gas is a significant contributor to climate change: methane from natural gas is a GHG that exacerbates climate change, and methane emissions associated with natural gas exploration, development, and use are 28 to 84 times as powerful as CO_2 at trapping heat in the atmosphere.

Figure 12: ExxonMobil December 6, 2021 *Sacramento Bee* Video Advertisement

149. Shell also falsely portrays itself to consumers as part of the climate solution. Shell claims that it aims to become a net-zero emissions[144] energy business by 2050, and that it is "tackling climate change." For example, an advertisement ran as recently as November 18, 2022, on the mobile website of the *Whittier Daily News* suggesting—in neon green text—that Shell is "creating a net-zero world":

[144] "Net-zero" means achieving a balance between the carbon emitted into the atmosphere, and the carbon removed from it.

Figure 13: Shell November 18, 2022 *Whittier Daily News* Online Display Advertisement

150. However, in June 2023, Shell announced that it would no longer reduce annual oil and gas production through the end of the decade as previously announced, after selling off oil-producing assets and claiming the reduction in its own production as a reduction in emissions. Shell's CEO told the BBC that cutting oil and gas production would be "dangerous and irresponsible." In March 2024, Shell weakened its carbon reduction targets for 2030 and abandoned its 2035 carbon intensity target.

151. In advertisements in *The New York Times* and *The Washington Post*, Shell touts its investments in "lower-carbon transport fuels," including natural gas. In "The Mobility Quandary," under a "Finding Sustainable Solutions" banner, Shell singles out natural gas as "a critical component of a sustainable energy mix" and a "cleaner-burning fossil fuel." In "The Making of Sustainable Mobility," Shell describes natural gas as "a cleaner fossil fuel" with a "lighter carbon footprint." Shell's advertising fails to acknowledge, however, that natural gas production and combustion produce potent GHGs, and the net GHG emissions of natural gas are on a par with—and sometimes higher than—the GHG emissions from other fossil fuels.

152. Moreover, Shell's investments in clean energy pale in comparison with its investments in fossil fuel production. In the first half of 2023, Shell reported $11.6 billion in total spending, of which less than $1 billion went to renewables and "energy solutions"—a category that also includes fossil fuel investments such as marketing and trading of pipeline gas. In 2018, speaking at the Oil and Money conference in the U.K., Shell's CEO, after acknowledging the challenge of climate change and referring to recent headlines about Shell's investments in the

clean energy industry, such as acquiring the renewable electricity company First Utility, said, "even headlines that are true can be misleading. They might even make people think we have gone soft on the future of oil and gas. If they did think that, they would be wrong." Leaving no doubt about Shell's plans regarding clean, renewable energy, or lack thereof, he stated that "Shell's core business is, and will be for the foreseeable future, very much in oil and gas."

153. Using a remarkably similar playbook, Chevron claims that it "is committed to addressing climate change" and touts its intentions to invest billions of dollars in carbon reduction projects, as well as its net-zero "aspirations." And Chevron's director states in a 2021 report, "We believe the future of energy will be lower carbon, and we intend to be a leader in that future." Its CEO claims that Chevron's "work to create fuels of the future—like hydrogen, renewable diesel, and sustainable aviation fuel—seeks to lower the carbon intensity of these products and support our customers' efforts to reduce their greenhouse gas emissions." Chevron representatives have even delivered public seminars at top educational institutions, deceptively claiming Chevron uses its "unique capabilities, assets and expertise to deliver progress" toward the global ambition of achieving net-zero carbon emissions.

154. Chevron's advertising touts the various measures it will take to reach net-zero in 2050. In one such online video advertisement that ran as recently as 2022, Chevron's Executive Vice President, Joe Geagea, proclaimed that Chevron "operate[s] the largest carbon capture and sequestration project in the world." Geagea also stated, "People think of us as an energy company, but at the heart of it we are a technology company."

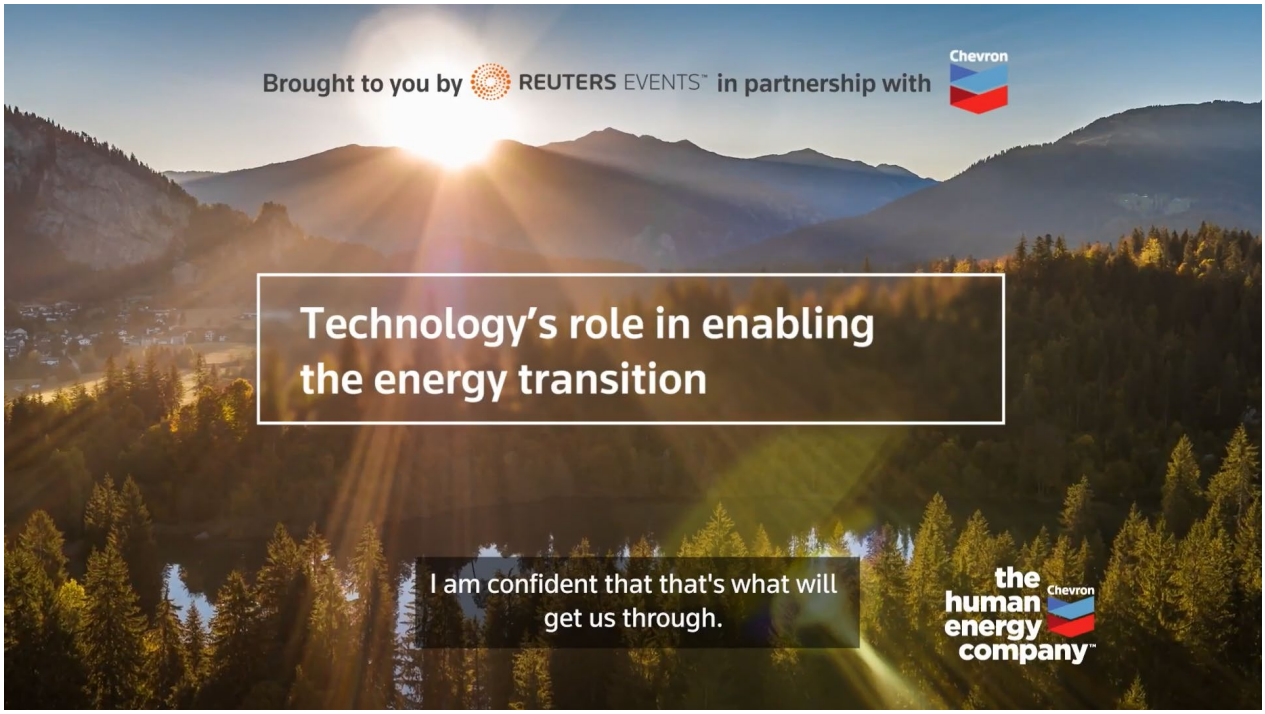


Figure 14: Chevron January 8, 2022 *Thomson Reuters* Advertisement

The advertisement fails to mention that as of early 2022, the carbon capture and sequestration project, located in Australia, had failed to meet its carbon capture targets since it began injecting CO_2 in 2019. And as recently as 2023, the project has been operating at only one-third of its planned capacity.

155. Chevron has saturated the California media market with advertisements casting itself as a good environmental citizen. For example, advertisements show motivational images of individuals enjoying the environment—for example, hiking, stargazing, and camping. In those advertisements, the narrator reassures the viewer: "We believe the future of energy is lower carbon." Below are stills from an example video advertisement that ran as recently as October 31, 2021, on the *San Francisco Examiner*'s website. This video touts Chevron's investment in a nuclear fusion start-up.

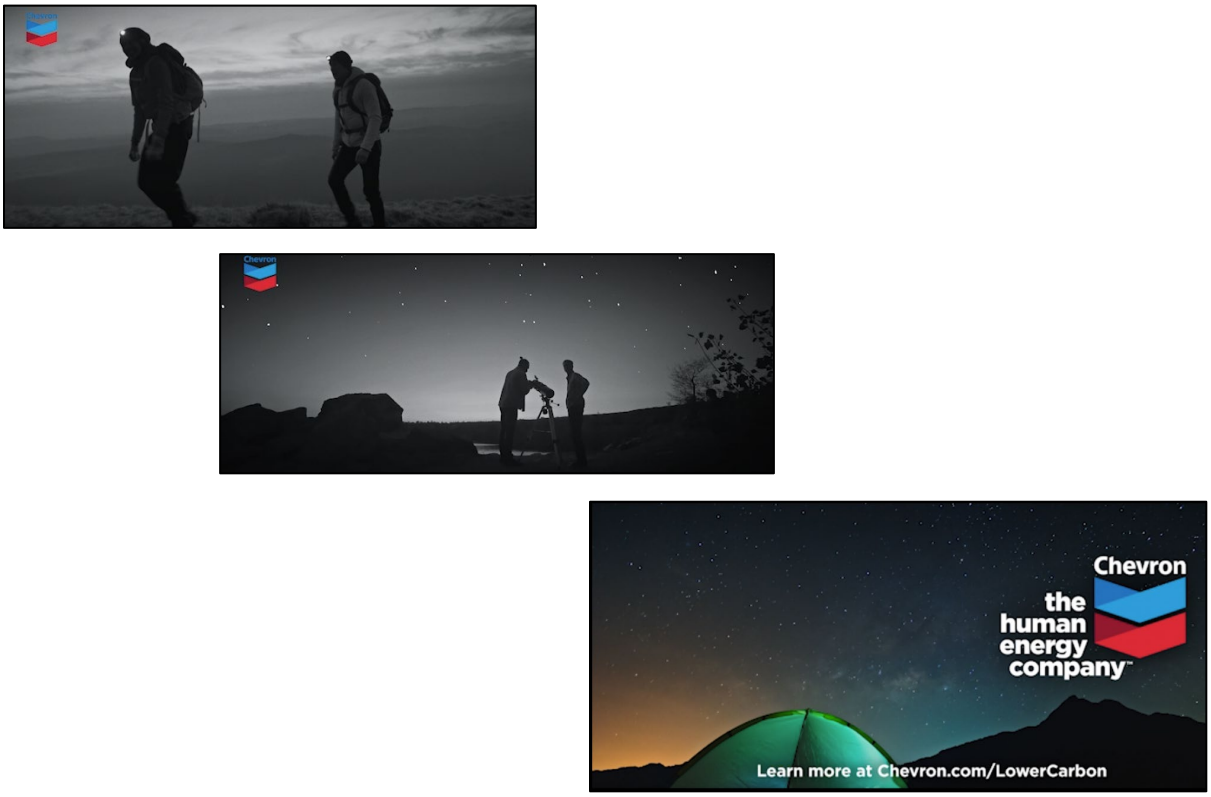


Figure 15: Chevron October 31, 2021 *San Francisco Examiner* Video Advertisement

156. Chevron announced investments in a nuclear fusion company in 2020, but did not disclose the amount invested. However, the total funding raised by that company from all investors through the date of the advertisement above was approximately $34 million; even if Chevron had been the sole investor (which it was not), that amount would represent just 0.04% of Chevron's total investments in 2020 and 2021. Chevron's minimal efforts in the area of renewable and lower-carbon energy, coupled with its expansion of its fossil fuel business, belie its statements suggesting that it is part of the climate change solution. From 2010 to 2018, according to one analysis, Chevron's investments in low-carbon energy sources were only 0.2% of Chevron's capital spending, compared to 99.8% in continuing its fossil fuel exploration and development. Chevron to this day continues to prioritize capital expenditures in its traditional fossil fuel business over its investments in renewable and low-carbon energy.

157. ConocoPhillips claims, similarly, that its "actions for [its] oil and gas operations are aligned with the aims of the Paris Agreement" and touts its actions and achievements toward the net-zero energy transition. But these claims are contradicted by the company's substantial

investments in expanding its fossil fuel production and sales. For example, the company's new Willow Project in Alaska is expected to produce approximately 576 million barrels of oil, with associated indirect GHG emissions equivalent to 239 million tons of CO_2. Moreover, ConocoPhillips reported that it spent $150 million on emissions reductions and low-carbon opportunities in 2022—merely 1.5% of its capital investments that year.

158. Similarly, in a 2021 promotional video on Facebook, Phillips 66 proclaims that it is "committed to helping the world address climate change." The message is accompanied by an image of what appears to be a Phillips 66 refinery worker gently brushing some tall wild grass.

Figure 16: Phillips 66 October 1, 2021 Social Media Advertisement (Facebook)

The advertisement highlights Phillips 66's plans to invest in new technologies, support electric vehicle production, use renewable power in its operations, and produce "over 1.5 billion gallons of renewable fuels" annually by 2030. However, these investments are dwarfed by the scale of Phillips 66's investments in fossil fuel production. Even if Phillips 66 were to meet its goal of producing 1.5 billion gallons of renewable fuels, this would amount to just 5% of Phillips 66's annual refining capacity in 2023.

159. BP also has misleadingly portrayed itself, and continues to misleadingly portray itself, as a climate leader, claiming that it aims to be a net-zero company by 2050 or sooner and to help the world get there too. Further, BP emphasized in its "Possibilities Everywhere" campaign,

which it ended in 2020, the company's investments in renewable energy, such as solar and wind energy, and "cleaner" energy like natural gas. In its "Blade Runner" advertisement, BP claims that it is "one of the major wind energy businesses in the US." BP has run its misleading advertisements across California and in national media outlets. For example, in 2023 BP ran a series of advertisements touting its investments in offshore wind, electric vehicle chargers, and solar energy. These advertisements, featuring a bright blue and green color scheme, appeared on the websites of several different media outlets, including the *Los Angeles Times* and *ABC 7 San Francisco*.

160. In these advertisements, BP failed to mention that its investments in clean energy resources have been relatively meager. From 2010 to 2018, according to one analysis, BP only devoted 2.3% of its capital expenditures to clean energy development. BP also failed to mention that in 2019, at the time of its "Blade Runner" advertisement, BP only owned about 1% of the installed wind capacity in the U.S. Moreover, at a time of record-breaking profits, BP is scaling back its plan to lower emissions by 2030, and BP continues to make significant investments in fossil fuel production, refining, and sales.

161. API is also no stranger to misleading the public into believing that its and its members' actions are part of the solution, rather than the source of the problem. API markets itself as being an environmental steward, committed to helping reduce GHG emissions. API's 2021 Climate Action Framework portrays the organization as a partner in moving towards a climate solution, stating: "Our industry is essential to supplying energy that makes life modern, healthier and better while doing so in ways that tackle the climate challenge: lowering emissions, increasing efficiency, advancing technological innovation, building modern infrastructure and more." Tellingly, however, API's strategy does not advocate for or even mention reduction in fossil fuel production as a strategy to protect the climate. Rather, it focuses on potential technical advances and shifting to heavier reliance on natural gas as a "clean fuel." And an internal API email shows that its Climate Action Framework was in fact organized around the purpose of "the continued promotion of natural gas in a carbon constrained economy." As discussed above, natural gas is far from a "clean" fuel, as API misleadingly claims, as natural gas production and

use contributes substantially to climate change through the release of methane, an extremely potent greenhouse gas.

162. API delivers its messages to Californians through advertisements in California media outlets, among others. For example, in a video captured from *Coast News Group* (which covers Northern San Diego County) on February 14, 2020, API claims that "innovators in America's natural gas and oil companies have teamed up with America's brightest minds and reduced carbon emission levels to the lowest in a generation." Viewers are shown images of joggers and hikers, as shown below. The message is clear (and false): Consumers need not worry and can consume fossil fuels as normal because the oil and gas industry has climate change under control.

Figure 17: API February 14, 2020 *Coast News* Video Advertisement

H. Defendants' Concealments and Misrepresentations Regarding the Dangers of Fossil Fuel Products Encouraged Continued Use of Fossil Fuels and Discouraged Concerted Action on Greenhouse Gas Emissions

163. As a result of Defendants' efforts to deny and undermine climate science and conceal the dangers of fossil fuel consumption, Defendants encouraged consumers to continue to use fossil fuels and to make investments in cars, appliances, and other major purchases that would

commit them to consuming fossil fuels well into the future, and discouraged policymakers from imposing regulations limiting the use of fossil fuels.

164. As a result of Defendants' sustained and widespread campaign of disinformation, many California consumers have been unaware of the strength of the scientific consensus about the relationship between consumption of fossil fuels and climate change, the magnitude of the threat posed by their own use of fossil fuels, or of the contribution their purchasing behavior makes to aggravating the effects of climate change.

165. By misleading California consumers about the climate impacts of using fossil fuel products, and by failing to disclose the climate risks associated with their purchase and use of those products, Defendants deprived consumers of information about the consequences of their purchasing decisions. This led to consumers using more fossil fuels, and using fossil fuels less efficiently, than they otherwise would have done in the absence of Defendants' deception.

166. As with cigarettes, history demonstrates that when consumers are made aware of the harmful effects or qualities of the products they purchase, they often choose to stop purchasing them, to reduce their purchases, or to make different purchasing decisions. More than 40 percent of adults in the United States smoked cigarettes in the early 1970s; recent data indicate that the current figure is 12 percent. 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 plastics in harming human health and the environment has spurred a growing market for plastic-free products and packaging. With access to information about health and environmental impacts, consumers have demanded healthier choices, and the market has responded.

167. A consumer who received accurate information that fossil fuel use was a primary driver of climate change, and about the resultant dangers to the environment and to public health, might have decreased the consumer's use of fossil fuel products and/or demanded lower-carbon transportation options from policymakers. Indeed, recent studies and surveys have found that consumers with substantial awareness of climate change are largely willing "to change their

consumption habits . . . to help reduce the impacts of climate change."[145] If consumers were aware of what the Defendants knew about climate change when the Defendants knew it, consumers might have opted to avoid or minimize airplane travel; avoid or combine car travel trips; carpool; switch to more fuel-efficient vehicles, hybrid vehicles, or electric vehicles; demand more charging infrastructure for electric vehicles; use a car-sharing service; seek transportation alternatives all or some of the time, if and when available (e.g., public transportation, biking, or walking); or adopt any combination of these choices. In addition, informed consumers often attempt to contribute toward solving environmental problems by supporting companies that they perceive to be developing "green" or more environmentally friendly products.[146]

168. As described herein, by casting doubt upon the scientific consensus on climate change, Defendants deceived consumers about the relationship between consumption of fossil fuels and climate change, and the magnitude of the threat posed by fossil fuel use. Consumers equipped with complete and accurate knowledge about the climate and the public health effects of continued consumption of fossil fuels would have likely formed a receptive customer base for clean energy alternatives decades before such demand in fact developed. Instead, Defendants' campaign of deception allowed them to exploit public uncertainty to reap substantial profits.

169. As described herein, Defendants' campaign of deception was also aimed at discouraging policymakers and lawmakers from taking action on climate change. By downplaying the scientific consensus on climate change and emphasizing uncertainty, Defendants hoped to delay any regulatory action that might seek to reduce or control GHG emissions, thereby threatening the industry's profits.[147]

[145] The Conference Board, Changes in Consumers' Habits Related to Climate Change May Require New Marketing and Business Models (Oct. 26, 2022), available at https://www.conference-board.org/topics/consumers-attitudes-sustainability/changes-in-consumer-habits-related-to-climate-change (as of June 5, 2024).

[146] See, e.g., Leiserwitz et al., Program on Climate Change Communication, Yale University, and Center for Climate Change Communication, George Mason University, Consumer Activism on Global Warming, September 2021 (2021), available at https://climatecommunication.yale.edu/wp-content/uploads/2021/12/consumer-activism-on-global-warming-september-2021.pdf (as of June 5, 2024). About a third of American consumers surveyed report "reward[ing] companies that are taking steps to reduce global warming by buying their products" and "punish[ing] companies that are opposing steps to reduce global warming by *not* buying their products." (*Id.* at p. 3.)

[147] See, e.g., *supra*, ¶¶ 51, 99.

170. By sowing doubt in the minds of consumers, the media, policymakers, and the public about the magnitude and the urgency of climate threats, Defendants delayed regulatory action on GHG emissions, exacerbating the climate crisis and causing significant harm to California and its residents.

I. The Effects of Defendants' Deceit Are Ongoing

171. The consequences of Defendants' tortious misconduct—in the form of misrepresentations, omissions, and deceit—began decades ago, and continue to be felt to this day. As described above, Defendants, directly and/or through membership in other organizations, misrepresented their own activities, the fact that their products cause climate change, and the danger presented by climate change.

172. Defendants' collective goal was to ensure that "[a] majority of the American public, including industry leadership, recognizes that significant uncertainties exist in climate science, and therefore raises questions among those (e.g. Congress) who chart the future U.S. course on global climate change."[148] In 2023, only 20% of Americans understand how strong the level of consensus is among scientists that human-caused global warming is happening, and 28% think climate change is caused mostly by natural changes in the environment.[149]

173. Defendants' misrepresentations, omissions, and deceit had a significant and long-lasting effect on how the public views climate change and the dangers of fossil fuel use that continues to the present day. By sowing doubt in the minds of the public, Defendants substantially altered the public discourse on climate change, and intentionally delayed action on climate change, ensuring that they would continue to earn immense revenues and profits.

174. If Defendants had been forthcoming about their own climate research and understanding of the dangers of fossil fuel products, consumers, policymakers, and the public

[148] Joe Walker, email to Global Climate Science Team re Draft Global Climate Science Communications Plan (Apr. 3, 1998), available at https://assets.documentcloud.org/documents/784572/api-global-climate-science-communications-plan.pdf (as of June 5, 2024).

[149] Leiserowitz et al., Program on Climate Change Communication, Yale University, and Center for Climate Change Communication, George Mason University, Climate Change in the American Mind: Beliefs & Attitudes, Spring 2023 (2023) pp. 3, 8, available at https://climatecommunication.yale.edu/publications/climate-change-in-the-american-mind-beliefs-attitudes-spring-2023/ (as of June 5, 2024).

could have made substantial progress in transitioning to a lower-carbon economy, at a much earlier time, potentially averting some of the effects of the climate crisis that California is experiencing today.

175. Moreover, by concealing the very fact of their campaign of deception, including by using front groups to obscure their own involvement in the deception, Defendants concealed their unlawful conduct from the public and the State, thereby preventing the State from discovering the facts underlying the claims alleged herein.

176. Due to Defendants' deceptive and misleading conduct, California is in the throes of a climate crisis—one that would have been avoidable in part had Defendants acted differently.

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

177. Defendants' individual and collective conduct is a substantial factor in causing harms to California. This conduct includes, but is not limited to, their wrongful promotion of fossil fuel products, their concealment of the known hazards associated with the use of those products, and their public deception campaigns designed to obscure the connection between these products and climate change and its public health, environmental, physical, social, and economic consequences. Such consequences include, but are not limited to, the following: extreme heat; drought; wildfires; increased frequency and intensity of extreme weather events, including coastal and inland storms and associated flooding; habitat loss and species impacts; sea level rise and attendant flooding, erosion, damage to riparian lands and submerged lands, and loss of wetlands and beaches; ocean warming and acidification; and the cascading social, economic, health, and other consequences of these environmental changes. These adverse impacts will continue to increase in frequency and severity in California and disproportionately impact frontline communities.

178. As an actual and proximate result of Defendants' conduct, which was a substantial factor in bringing about the aforementioned environmental changes, the State has suffered and will continue to suffer severe harms and losses. These include, but are not limited to, the following: increased costs associated with public health impacts, environmental impacts, and

economic impacts; 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 costs for responding to increasingly frequent natural disasters and increasingly intense weather events, including extreme heat, drought, wildfires, coastal and inland storms and associated flooding, and extreme precipitation events; and increased planning and preparation costs for community adaptation and resilience to climate change's effects.

179. The State has incurred, and will foreseeably continue to incur, as a result of Defendants' deceptive conduct as described in this Complaint, injuries due to delays in taking action to mitigate or curtail the climate crisis. As a result of Defendants' wrongful conduct, California has experienced, is experiencing, and will continue to experience significant adverse impacts, including, but not limited to, those described below.

1. Extreme Heat

180. California is being impacted and will continue to be impacted in years and decades to come by higher average temperatures and more frequent and severe heat waves. The last nine years have been the nine hottest on record, and that trend is only expected to continue. These changes will pose a risk to every region of the state. Severe harms from rising temperatures are already a reality in many frontline communities. Members of frontline communities tend to work in occupations with increased exposure to extreme heat, such as the agricultural, construction, and delivery industries.

181. Globally, increased concentrations of carbon dioxide and other gases in the atmosphere are causing a continuing increase in the planet's average temperature. California temperatures have risen since records began in 1895, and the rate of increase is accelerating.

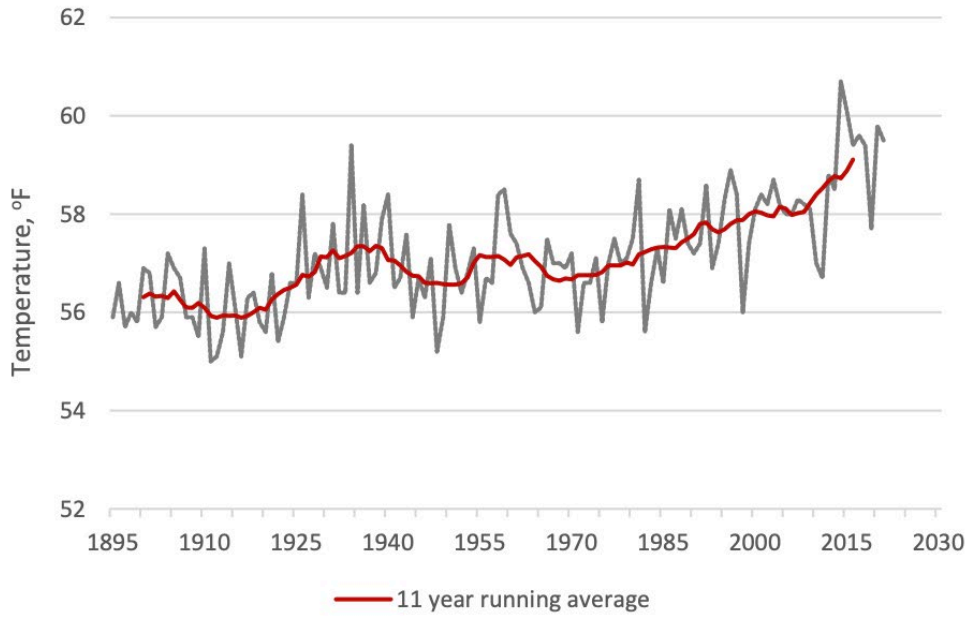


Figure 18: Statewide Annual Average Temperatures

182. Death Valley recorded the world's highest reliably measured temperature (130°F) in July 2021, breaking its own record (129°F) set in summer 2020. Meanwhile, the City of Fresno also broke one of its own records in 2021, with 64 days over 100°F that year. This is part of a trend: the daily maximum average temperature, an indicator of extreme temperature shifts, is expected to rise by 4.4°F to 5.8°F by 2050 and by 5.6°F to 8.8°F by 2100. Heat waves that result in public health impacts are also projected to worsen throughout California. By 2050, these heat-related health events are projected to last two weeks longer in the Central Valley and occur four to ten times more often in the Northern Sierra region.

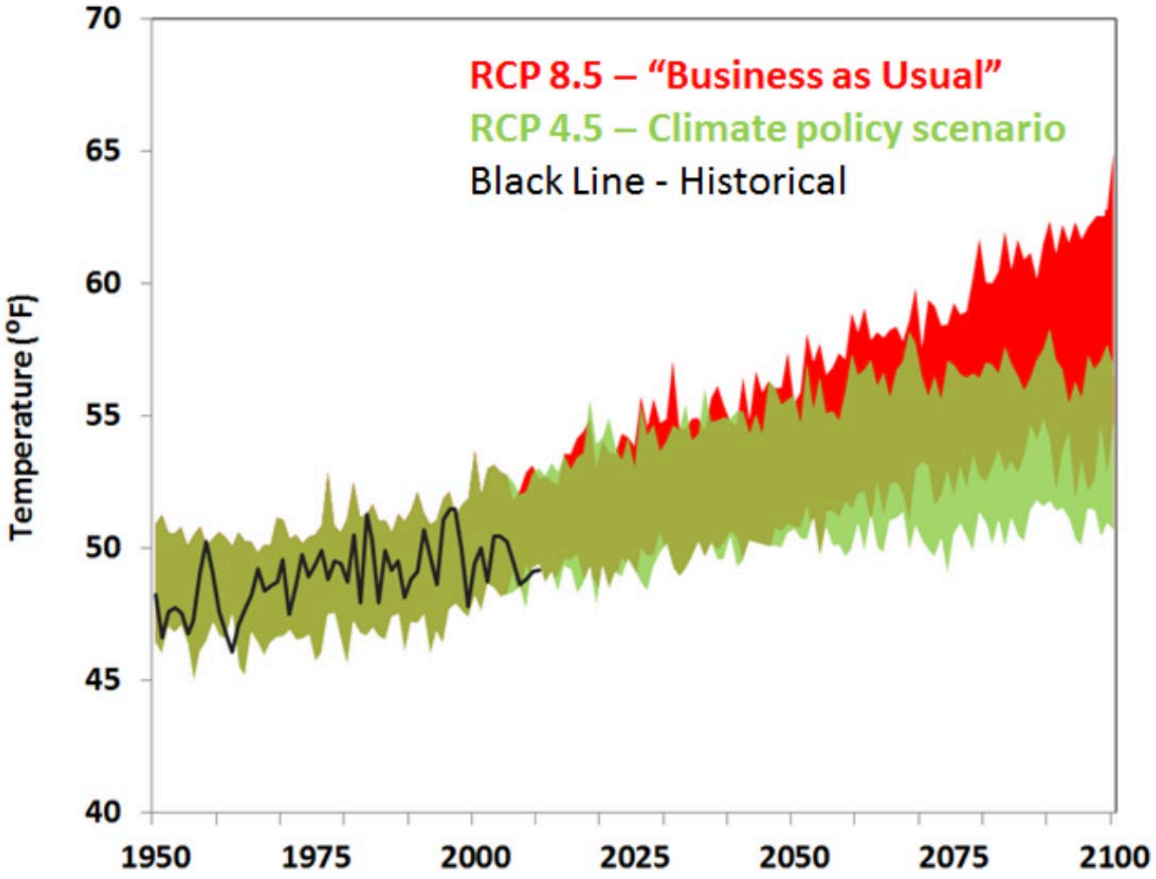


Figure 19: Projected California Temperature Increases[150]

183. Recent heat waves have broken heat records and caused serious illness across the state, and these events are becoming more frequent. Heat waves have a particularly high impact in Southern California, where they have become more intense and longer-lasting. In the past two years, Los Angeles recorded 121°F, and the Coachella Valley had its hottest year ever, with temperatures reaching 123°F. In urbanized environments, pavement, cement, and other non-vegetated areas contribute to the "heat island" effect, in which built environments retain heat, causing daytime temperatures to be 1° to 6°F hotter than rural areas and nighttime temperatures to be as much as 22°F hotter. The heat island effect is inequitably distributed, and disproportionately

[150] RCP in this graph refers to Representative Concentration Pathways, which are projections based on the emissions scenarios used by the IPCC's Fifth Assessment Report. There are four RCPs (2.6, 4.5, 6.0 and 8.5), and each RCP represents a family of possible underlying socioeconomic conditions, policy options, and technological considerations, from a low-end scenario (RCP 2.6) that requires significant emissions reductions to a high-end, "business-as-usual," fossil fuel-intensive emission scenario (RCP 8.5).

affects frontline communities. Heat events exacerbate respiratory and cardiac illness and cause emergency room visits to soar. Young children, the elderly, people with preexisting health conditions, and African Americans are more vulnerable than the rest of the population to extreme heat events.

184. Heat ranks among the deadliest of all climate hazards in California, and heat waves in cities are projected to cause two to three times more heat-related deaths by mid-century. Frontline communities will experience the worst of these effects, as heat risk is associated and correlated with physical, social, political, and economic factors.

185. Heat events also lead to increased poultry and livestock mortality, which can lead to potentially adverse impacts to public health, animal health, and the environment, and resultant economic losses. Hotter weather can deteriorate the integrity of containment systems at toxic waste sites.

186. Extreme heat also threatens California's natural systems. Increasing temperatures, for example, lead to exacerbated risk of wildfire; drought and its effects on the health of watersheds; and negative effects on plants and animals, including reduced fitness, increased stress, decreased reproduction, migration, death, and in some cases extinction. These shifts result in significant cultural impacts to tribes, where plants and animals that have been used as traditional food, medicine, materials, or in ceremonies are no longer available.

2. Drought and Water Shortages

187. Anthropogenic warming has increased the likelihood, frequency, and duration of extreme droughts in California.

188. Over the last three years, the State has earmarked more than $8 billion to modernize water infrastructure and management, as part of planning for a potential loss of 10% of its water supplies by 2040 due to climate change.

189. California's five-year drought of 2012 to 2016 occurred in a setting of then-record statewide warmth and set numerous hydrologic and impact records, including lowest statewide snowpack, groundwater levels in many parts of California falling below previous historical lows,

and severe resultant land subsidence. This event was soon followed by the 2020-2023 drought, which again set new hydrologic records.

190. Snowpack in the Sierra Nevada mountains serves as a vital water storage and supply system for California, supplying roughly 30% of the state's water needs in an average year. Warmer winter temperatures caused by climate change are reducing the fraction of precipitation falling as snow, and increased evaporation is reducing snowpack volume. Recent projections show that the Sierra snowpack could decline to less than two-thirds of its historical average by 2050, even if precipitation remains relatively stable.

191. Warmer temperatures in the spring and summer cause the snowpack to melt earlier and more quickly. This rapid melting can result in flooding, and can reduce California's supplies of water stored in reservoirs.

192. Warmer average temperatures across California will increase moisture loss from soils, which leads to drier summers even if winter precipitation increases. Climate projections show that the seasonal summer dryness in California may start earlier in the spring due to earlier soil drying, and last longer into the fall and winter.

193. Droughts have significant environmental, social, and economic repercussions in California, and their impacts are widespread. The 2012-2016 and 2020-2022 droughts impacted most of California and required statewide responses. Future climate-exacerbated droughts are expected to harm the State and its people by, among other things, causing drinking water shortages, damaging the State's agricultural industry, depleting groundwater, devastating aquatic ecosystems, increasing the intensity and severity of wildfires, reducing the availability of hydroelectricity, and harming human health.

194. Drinking water shortages primarily affect small drinking water systems and domestic wells, which are often found in rural communities. In 2015, more than 100 small water systems experienced water shortages, and more than 2,000 domestic wells went dry. These vulnerable systems are located throughout California, and approximately half serve frontline communities. In the 2012-2016 drought, some rural frontline communities in the San Joaquin Valley relied on bottled water, interim tanks, and filling buckets and barrels with water from neighboring

communities. From July 2021 to August 2023, the State spent over $100 million providing emergency bottled and hauled water to communities experiencing drinking water shortages.

195. California is the top agriculture-producing state in the nation, accounting for more than 60% of the country's production of vegetables and two-thirds of the country's fruit and nut crops. The state's agricultural industry accounts for 40% of total water use in an average year. Drought conditions can result in crop losses and decreased agriculture production, and future water shortages are expected to limit agricultural suitability for various crops. The resulting economic damages will be substantial—in 2016 alone, the impacts of drought on California's agriculture industry resulted in over $600 million in direct economic damages and the loss of 4,700 jobs.

196. Reliance on groundwater increases during droughts, when surface water storage is depleted due to reduced precipitation and low snowpack. Overdraft of groundwater may cause land subsidence, which can impact infrastructure—including water conveyance systems, roads, railways, bridges—aquifer storage capacity, and land topography. Increased groundwater pumping during drought also worsens groundwater quality, causing increased contamination of drinking water supplies. Under the Sustainable Groundwater Management Act, which was passed in 2014, the State has spent more than $300 million to fund Groundwater Sustainability Agencies to manage groundwater resources at the local level.

197. Drought harms aquatic ecosystems by causing low water flows, which, among other things, negatively impact water quality by affecting factors like temperature and salinity and increasing the concentration of pollutants in water. As many as 18 California native fish species would have been at high risk of extinction if the 2012-2016 drought had continued. Drought has contributed to a precipitous decline in Chinook salmon populations in California and led to an economically devastating shutdown of California's salmon fishery in 2023. Drought also reduces water availability for California's managed wetlands, harming millions of migratory birds that rely on those wetlands by reducing food and habitat availability.

198. Dry conditions produced by droughts can lead to more intense and severe wildfires. A 2016 study found that climate-induced warming and drying have created a favorable environment

for fires, doubling the area burned by forest fires over the area expected to burn from natural climate variability alone from 1984 to 2015. Several of the largest, most destructive, and deadliest wildfires in state history followed the 2012-2016 drought. The second largest in the State's history, the Dixie Fire, occurred during the 2021 drought year. For additional discussion of wildfire harms, see Section IV.J.3, *infra.*

199. Drought can also affect human health by increasing harmful algal blooms, altering patterns of certain vector-borne diseases, increasing the risk of water-borne diseases, and increasing air pollution from wildfires and dust storms.

200. The State has borne and will continue to bear the substantial costs associated with mitigating and responding to climate-exacerbated drought impacts.

3. Extreme Wildfire

201. Climate change has caused and will continue to cause an accelerated increase in the risk, occurrence, and intensity of wildfires in California, resulting in wildfire-related injuries to the State and its residents.

202. Wildfire has always been an essential element of California's ecology; however, climate change is leading to disruptions in the state's natural temperature and precipitation patterns that have helped maintain the healthy, balanced role of wildfire in California. The result is a wildfire crisis. Increasingly higher temperatures coupled with longer and more intense droughts have led to substantially drier vegetation and fuel loads across the state that are more easily ignitable during periods of hotter conditions, which are becoming more frequent and more intense in California under climate change. The wildfire season is beginning earlier in the year and ending later, and the footprint of wildfire in California has expanded due to climate change. More than 23 million acres of California wildlands, extended over half the state, are classified as under very high risk of fire, the highest fire hazard severity level. As demonstrated in the figures below, in 2023 compared to in 2007, more areas are at risk of fire, with increased severity of that risk in many areas.

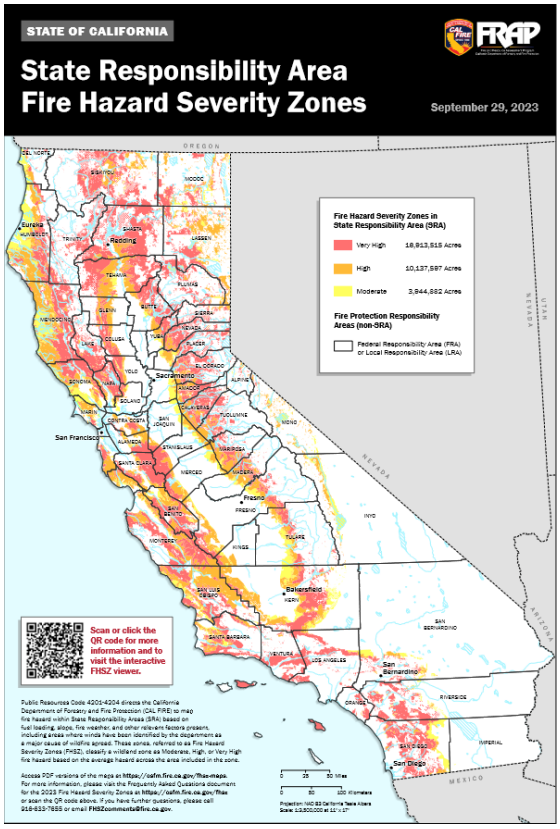


Figure 20: Fire Hazard Severity Zones, 2007 and 2023

Similarly, summer forest burned area during 1996 to 2021 showed a fivefold increase compared to the years 1971 to 1995, and one recent study found that nearly all of the increase in burned area is due to anthropogenic climate change.

203. The evidence is unequivocal that both the severity and intensity of wildfires in California are increasing as a result of climate change. Most of the largest and most destructive fires in California's history have occurred since 2000, as illustrated by the following chart:

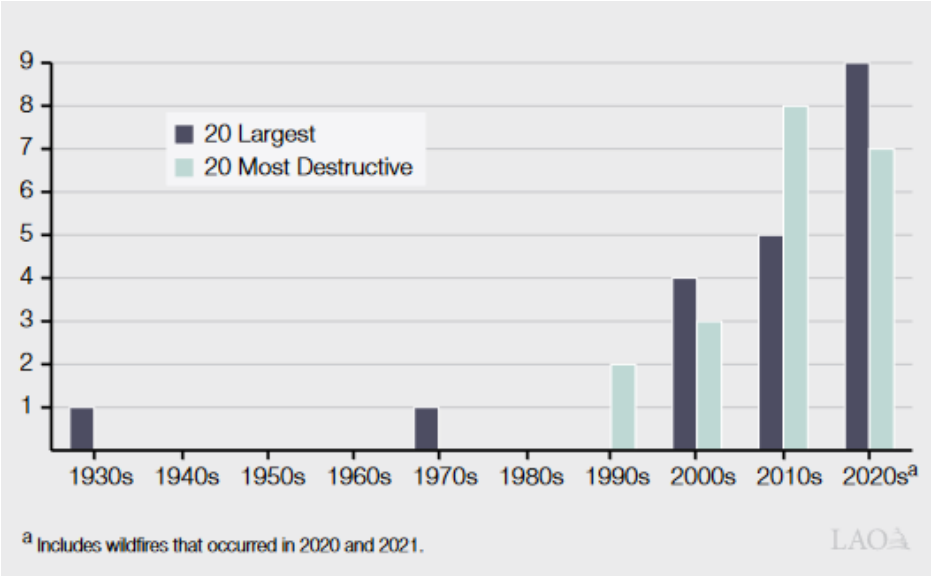


Figure 21: Largest and Most Destructive Wildfires in California

Nine of the 20 largest fires ever in California occurred in 2020 and 2021, after some of the driest and hottest years on record. California saw its largest wildfire season in 2020, when over 4.3 million acres burned (over 4% of the land within California, an area larger than the State of Rhode Island). In that season California also suffered its first gigafire, the August Complex Fire, which burned over a million acres through seven counties. The Camp Fire in 2018 burned fiercely and spread so rapidly that it destroyed the town of Paradise, California, in the fire's first four hours. The fire was the most destructive and costliest ever in the world, resulting in nearly 19,000 structures destroyed and over $16 billion in property damage. The fire was also the deadliest in California's history, with 85 civilian fatalities.

204. Related climate change impacts drive the increased risk, occurrence, and intensity of wildfire in California by impairing the health of forests and vegetation and creating conditions primed for megafires. Episodes of ever-more extreme drought are parching landscapes across California. Higher temperatures and diminishing quantities of available water create increasingly inhospitable conditions for trees at lower elevations and in hotter, drier southern regions. Consequently, new forest trees gravitate northward and upslope, leaving stressed and dying trees behind. Dead trees are more flammable than live trees, furthering California's wildfire risk. More frequent climate change-induced extreme weather events, such as extended periods of dry, hot, high winds and dry lightning storms, combine with the dangerous conditions on the ground not

only to create more wildfires in California but also to fan their flames. In 2020, during one of California's worst periods of drought, a severe dry lightning storm followed by dry high winds passed through Central and Northern California and sparked hundreds of wildfires. These fires were so intense, expansive, and numerous that they became known as the 2020 Fire Siege. This was a perfect storm of conditions, driven by climate change, creating catastrophic fires.

205. These catastrophic, climate change-driven wildfires result in substantial losses to the State's financial resources. While the State only owns about 3% (approximately one million acres) of the forestlands within California's boundaries, the State is financially responsible for wildfire protection for about 40% (over 31 million acres) of California's wildlands (approximately 79 million acres), which include forestland, watershed, and rangeland. The State spends billions of dollars on wildfire response annually; however, the cost of fighting more extreme climate change-driven wildfires is increasing. The State budgets for its response to large wildfires in the form of an emergency fund, which is funded each year based in part on the average costs of large wildfires over the previous five years. For the 2020-2021 fiscal year, the State budgeted $373 million for the emergency fund, but spent over $1.3 billion from the emergency fund during the 2020 Fire Siege. In 2011, the State spent only about $90 million on emergency fire suppression, but has not spent as little since.

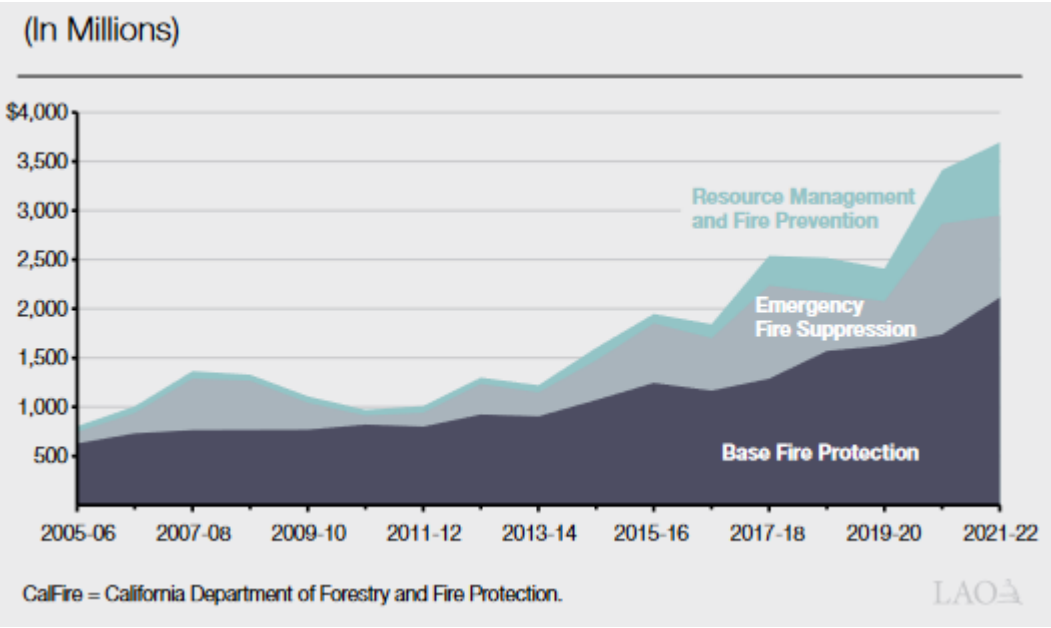


Figure 22: State Spending on CAL FIRE

206. Once suppressed, climate change-driven wildfires leave shattered communities in their wake, resulting in further financial loss to the State for wildfire recovery efforts. Increased wildfire smoke blankets these communities with ash that contains hazardous chemicals, such as the metals lead, cadmium, nickel, and arsenic; asbestos from older homes or other buildings; perfluorochemicals; flame retardants; caustic materials; and other debris, all of which must be removed before communities can rebuild. In addition to wildfire response, the State incurs further costs for wildfire recovery, including removal of household hazardous waste and wildfire debris in areas impacted by wildfire.

207. In addition to suppression and disaster response and recovery costs incurred by the State, the total property loss from recent fire seasons has also climbed to several billions of dollars per year.

208. Further, the State has lost precious natural resources to catastrophic, climate change-driven wildfires. During the 2020 Fire Siege, for example, the CZU Lightning Complex Fire effectively destroyed the State's oldest state park, Big Basin Redwoods State Park, and the surrounding forest of primarily coastal redwoods. The park lost all of its historic structures, and the awe-inspiring landscape of towering old- and second-growth coastal redwoods was razed. While old-growth redwoods are known for fire resilience, and while many survived and are currently recovering, it is also becoming clear that changing climatic conditions such as hotter, drier summers and prolonged extreme drought will play a significant role in how the forest of Big Basin Redwoods State Park declines or recovers in the decades to come. The vast majority of the park remains closed indefinitely as it recovers from the damage.

209. Substantial natural resource costs from wildfire also extend beyond the forests. Destruction from wildfires deteriorates watersheds, which stresses municipal water supplies and treatment operations. Some smoke plumes from these megafires are so immense and hot that they form pyrocumulus clouds that create their own hazardous weather, such as lightning, hail, and tornadoes. These gigantic billows of smoke travel thousands of miles at both high and low elevations, severely compromising air quality and harming public health.

210. With the health of forests impaired and conditions worsening as the climate warms, the State has incurred costs and will incur further costs to manage forestlands to prevent future catastrophic, climate change-driven wildfires. Recently, the State has devoted $2.7 billion over three years to address wildfire resiliency in California.

4. Public Health Injuries

211. Climate change has caused and will continue to cause significant public health-related injuries to the State and its residents.

212. Heat causes more reported deaths per year on average in the United States than any other weather hazard. Greater numbers of extreme heat events in California will result in increased risk of heat-related illnesses (from mild heat stress to fatal heat stroke). Certain groups are more vulnerable to heat exposure. These include the elderly, young children, people with pre-existing health conditions (such as heart or lung disease), and African Americans.[151] Workers who engage in vigorous physical activity, especially outdoors, are also at risk, including workers in construction, firefighting, and agriculture. Farmworkers die of heat-related causes at 20 times the rate of the rest of the U.S. civilian workforce. Since 2005, the first year California began tracking the number of heat-related fatalities, 36% of California's heat-related worker deaths have been of farmworkers. Similarly, although construction workers comprise only 6% of the national workforce, they account for 36% of heat-related deaths.

213. The rate of occupational heat-related deaths in California slightly exceeds the national average. In 2006, dramatic increases in many heat-related illnesses and deaths were reported following a record-breaking heat wave. Over 16,000 excess emergency room visits, over 1,100 excess hospitalizations, and at least 140 deaths occurred between July 15 and August 1, 2006. Projections for California estimate about a 10- to 20-fold increase in the number of extremely hot days by the mid-21st century, and about a 20- to 30-fold increase by the end of the century.

214. Californians already experience the worst air quality in the nation. Hotter temperatures lead to more smog, which can damage lungs, and increase childhood asthma,

[151] Heat deaths or illness are underreported or misclassified. Hence, the available data on heat-related illnesses and deaths likely underestimate the full health impact of exposure to periods of high temperatures.

respiratory and heart disease, and death. Air quality is expected to deteriorate due to rising temperatures, as ground-level ozone and particulate matter concentrations rise. Ozone and particulate matter are associated with a wide range of harmful health effects in humans, including cardiovascular disease, cancer, and asthma.

215. The smoke from climate change-driven wildfires has also compromised and will further compromise California's air quality. Smoke from these fires has reached everywhere in California, clogging the skies, eclipsing the sun, and suffocating Californians' air. Wildfire smoke is a complex mixture of toxic gases, fine particulate matter, and other pollutants. Most of the state has experienced large increases in wildfire-driven air pollution when comparing air quality data from 2002-2013 with those from 2014-2020. During the 2020 Fire Siege, all of California was covered by wildfire smoke for over 45 days—and 36 counties for at least 90 days. Altogether, more than half of California's population experienced approximately one month characterized by unhealthy, very unhealthy, or hazardous levels of wildfire smoke during the 2020 fire season. The five highest average daily air pollution readings ever recorded in California occurred in 2020.

216. The decline in air quality from wildfire smoke has had pernicious impacts on the State's public health. Exposure to wildfire smoke has been linked to respiratory infections, cardiac arrests, low birth weight, mental health conditions, and exacerbated asthma and chronic obstructive pulmonary disease. Sensitive groups, such as children, pregnant people, and the elderly; those with underlying health conditions; and those whose occupations require working outdoors with greater exposure to wildfire smoke, such as agricultural workers, suffer an even greater risk of harmful health effects from wildfire smoke. Researchers from Stanford University estimated California wildfire smoke likely led to at least 1,200 and as many as 3,000 excess California deaths between August 1 and September 10, 2020 alone.

217. Heavy precipitation, sea level rise, and extreme weather events will lead to more frequent flooding, which causes death and injury in addition to secondary health risks such as damage to sanitation infrastructure, aggravation of chronic diseases, and contamination of drinking water, land, and property which jeopardizes human health and the State economy. As one example, the alternating cycle of heavy precipitation and heat attributed to climate change

provides an ideal condition for fungal Valley Fever outbreaks. Sea level rise and increased flooding are also expected to lead to increased risk of contamination and chemical exposure due to flooding of toxic sites. These risks are particularly acute for California because 68.5% of the state's population lives in the coastal areas. As pest seasons and ranges expand, vector-and tick-borne illnesses will increase in California's population. The State has borne, and will continue to bear, costs associated with mitigating and responding to these public health threats.

5. Extreme Storms and Flooding

218. Much of California's winter precipitation arrives in the form of "atmospheric river" storms, which are fed by long streams of water vapor transported from the Pacific Ocean. These storms deliver extreme precipitation when their moisture-laden winds encounter California's coastal mountain ranges.

219. Atmospheric rivers and the heavy precipitation they bring are the major cause of historical floods in California, resulting significant damage to property and public infrastructure and substantial economic losses.

220. Studies uniformly show that atmospheric rivers are likely to become more frequent and more intense in the future, in part because warmer air allows atmospheric rivers to hold more moisture. In a warmer future climate, total precipitation in atmospheric river events is projected to increase by about 25% on average throughout the state, and maximum hourly precipitation rates may increase by 30%.

221. With the increased likelihood of extreme storms comes an increased risk of catastrophic flooding. Because warming temperatures will cause a lower proportion of winter storms to fall as snow, the predicted 25% increase in total precipitation from atmospheric river events will result in 50% more runoff, posing significant flood risks. Additionally, higher hourly precipitation rates will result in short-duration bursts of intense precipitation, which pose a significant risk of flash flooding and related hazards, such as mudslides.

222. One recent study analyzed the likelihood that California would experience a "megaflood" in the future—a historically rare flood caused by 30 consecutive days of precipitation. Researchers found that the annual likelihood of a megaflood increases rapidly for

each 1°C of global warming, and that warming as of 2022 has already doubled the annual likelihood of a megaflood. By 2060, megafloods—which historically occurred approximately once every two hundred years—may occur three times per century.

223. The State's water infrastructure consists of dams, reservoirs, aqueducts, canals, spillways, levees, and pumping plants designed to store and transport water and reduce flood risk. Much of this infrastructure was designed to operate within historical ranges of precipitation and temperatures, not the more frequent and intense storms that the State will face in the warming future. The flood improvement investments needed in the Central Valley alone are expected to cost the State between $1.8 and $2.8 billion through 2027. In the winter of 2022 to 2023, California experienced a series of severe atmospheric river storms that broke precipitation records throughout the state, with some areas of the state receiving more than 200% of average precipitation. These storms had devastating effects throughout California. More than 80 state park properties were fully or partially closed due to storm impacts. In March 2023, the Pajaro River breached a levee on the border of Monterey and Santa Cruz counties, triggering evacuation orders and warnings for more than 8,500 people, and leaving residents of the unincorporated community of Pajaro without safe drinking water for the next month. In the Central Valley, Tulare Lake—which was drained to support agriculture in the early 1900s and has been largely dry since—reappeared, flooding 168 square miles, and grew in size as the Sierra snowpack melted.

224. Floods can cause emergency conditions such as power, water, and gas outages; disrupt transportation routes and commercial supplies; damage homes, buildings, and roads; and cause severe environmental problems, including landslides and mudslides, which require response and recovery efforts by the State. Household, industrial, agricultural, and other wastes can contaminate floodwaters, creating chemical and biological public health risks to impacted communities. Flooding from storms often leads to increased sanitary sewer overflows. Drinking water supplies are often inundated with sewage and other contaminants from flood waters resulting in water use restrictions, including Boil Water Notices and Do Not Drink Orders, limiting or eliminating drinking water for communities. Burn scars from wildfires increase the risk of debris flows during episodes of increased precipitation. Locations downhill and

downstream from burned areas are susceptible to flash flooding and debris flows, especially near steep terrain. Rainfall that would normally be absorbed will run off extremely quickly after a wildfire. As a result, after a wildfire, much less rainfall is required to produce a flash flood. The force of the rushing water and debris can damage or destroy culverts, bridges, roadways, and buildings even miles away from the burned area.

225. In addition, extreme precipitation events can cause inundation of toxic waste sites, leading containment systems and structures not designed for extreme weather events to fail and release contamination.

226. The State has borne, and will continue to bear, the costs of constructing, maintaining, and upgrading water infrastructure, including flood management infrastructure, and otherwise responding to the damage caused by extreme storms and flooding.

6. Damage to Agriculture

227. California is a global leader in the agricultural sector and produces more than 400 types of commodities. The state produces over a third of the country's vegetables and two-thirds of its fruits and nuts. California is the largest and most diverse agricultural state in the United States.

228. While California farmers and ranchers have always been affected by the natural variability of weather from year to year, the increased rate and scale of climate change is beyond the realm of experience for the agricultural community.

229. Agricultural production in California is highly sensitive to climate change. Changes in temperatures and in the amounts, forms, and distribution of precipitation, increased frequency and intensity of climate extremes, and water availability are a few examples of climate-related challenges to California's agriculture sector. Irrigated agriculture produces nearly 90% of the harvested crops in California, and a decrease in water availability could reduce crop areas and yields. Drought can adversely affect agricultural crop production by slowing plant growth and causing severe crop yield losses. Lower stream flow and groundwater levels as a consequence of drought can harm plants by increasing the risk of wildfires when vegetation and soil surface dry out. Warmer environments can cause greater runoff caused by faster snowmelt. This, in turn,

causes reservoirs to fill up earlier, increasing the odds of both winter flooding and summer water deficits. Increasing temperatures result in more flooding events, which greatly affect plant survival through a reduction in oxygen availability, root asphyxia, and an increase in disease and nitrogen losses.

230. Changes in California's climate are negatively influencing California's highly productive agricultural industry. Impacts on agriculture include low chill hour accumulations, crop yield declines, increased pest and disease pressure, increased crop water demands, altered phenology of annual and perennial cropping systems, and uncertain future sustainability of some highly vulnerable crops.

231. Permanent crops are among the most profitable commodities in California. They are most commonly grown for more than 25 years, which makes them more vulnerable to impacts of climate change. Most of the permanent crops in California require several years to reach maturity and profitable production. California has already observed a significant loss of winter chill hours, due to an increase in average winter temperatures. Winter chill hours are defined as the number of hours spent below 45°F, necessary for the flowers of fruits and nuts to bloom, and required by certain crops to achieve high yields. According to University of California researchers, around the year 1950, growers in the Central Valley could rely on having between 700 and 1,200 chill hours annually. For chilling requirements of 500 hours (chestnut, pecan, and quince), only about 78% of the Central Valley will be suitable for production by the end of the 21st century. For chilling requirements of more than 700 hours (apricot, kiwifruit, peach, nectarine, plum, and walnut), only 23–46% of the valley remains suitable, and only 10% will remain suitable by 2080–2095. Only 4% of the area of the Central Valley was suitable in the year 2000 for species such as apples, cherries, and pears, which have annual chilling requirements of more than 1,000 hours; however, virtually no areas in California will remain suitable by 2041–2060 under any emissions scenario for these types of fruit crops.

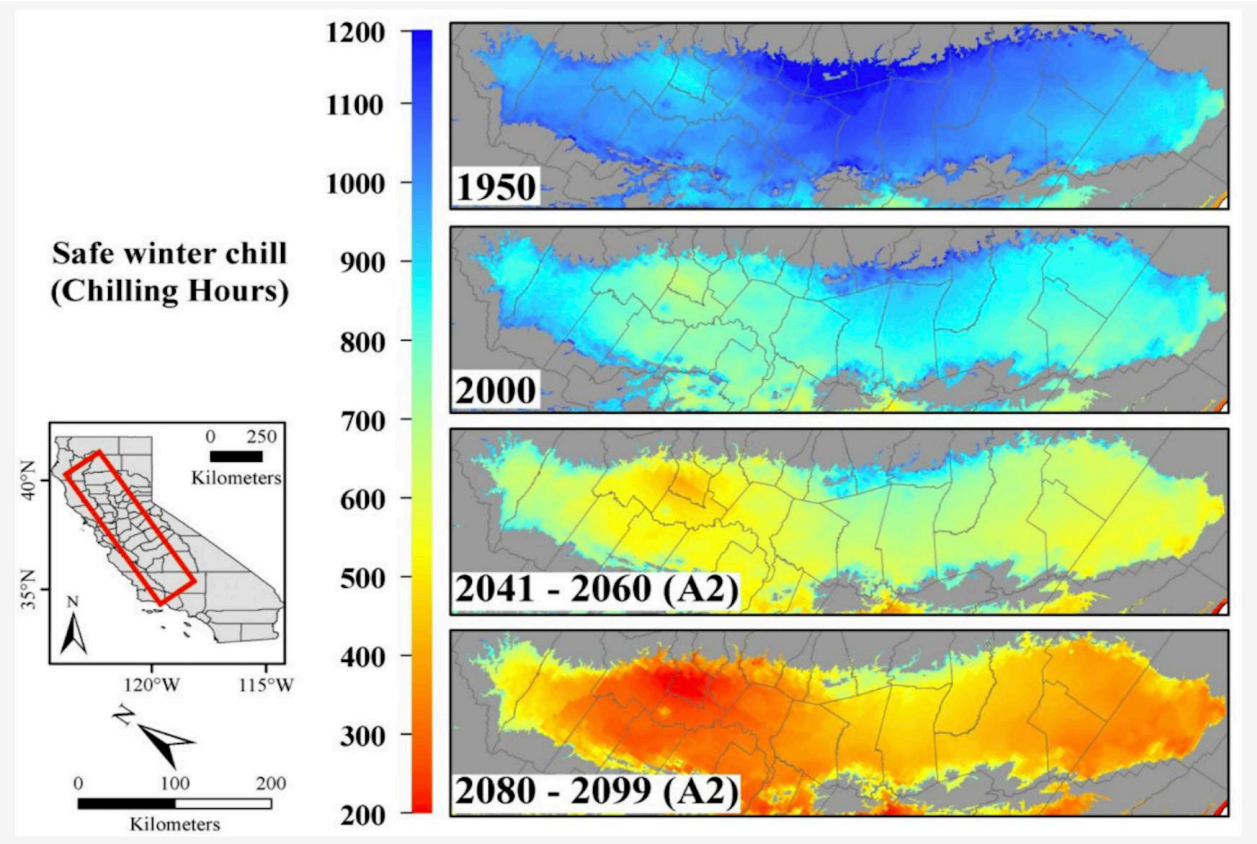


Figure 23: California Central Valley Winter Chill Hours in 1950, 2000, 2041–2060, and 2080–2099

232. Increases in invasive pests, changes to plant and pest interactions, and increases in plant and animal diseases in agriculture are some additional potential impacts from climate change. University of California researchers have indicated that due to climate change, by 2050, yields are projected to decline by 40% for avocados and 20% for almonds, table grapes, oranges, and walnuts. In 2021, drought resulted in the fallowing of nearly 400,000 acres of fields. Direct crop revenue losses were approximately $962 million, and total economic impacts were more than $1.7 billion, with over 14,000 full- and part-time job losses. During the 2011–2017 drought, California's agricultural industry suffered at least $5 billion in losses. Because California feeds not only its own residents, but the entire U.S. and other countries as well, production declines could lead to food shortages and higher prices.

7. Sea Level Rise, Coastal Flooding and Coastal Erosion

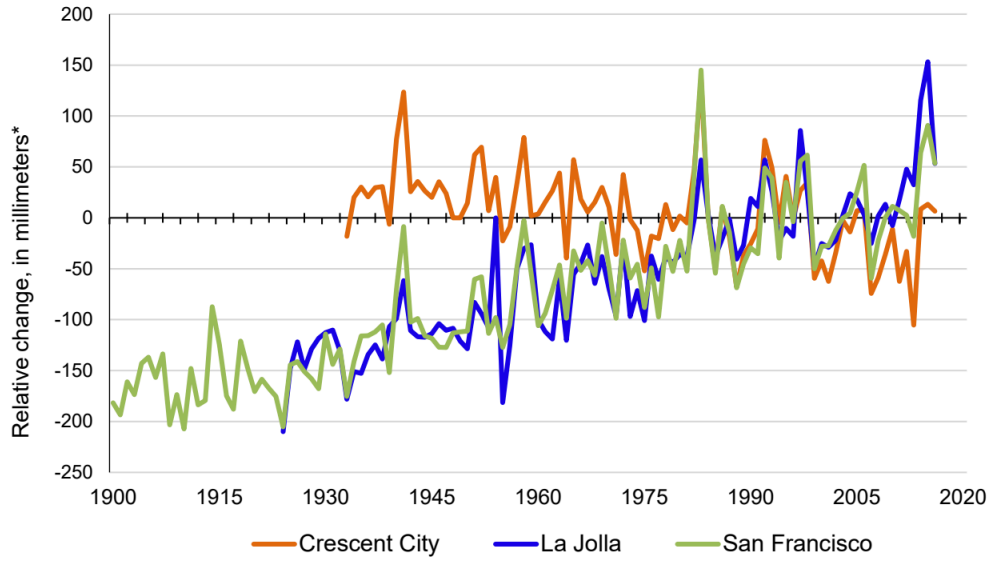
233. Climate change causes sea level rise in two primary ways: (1) by causing the melting of ice sheets and glaciers, and (2) by warming seawater, which consequently expands. Sea level

rise is already accelerating along the California coast and will continue to rise substantially over the twenty-first century, threatening coastal communities, natural resources, cultural sites, and infrastructure.

234. California has approximately 1,100 miles of coastline. California's 19 coastal counties are home to 68% of its people, 80% of its wages, and 80% of its GDP.[152] The sea level along California's coasts has risen nearly eight inches in the past century and is projected to rise by 3.5 feet, and as much as 6.6 feet under extreme scenarios, by the end of the century. As the Earth gradually warms, sea level rise will continue to threaten coastal communities and infrastructure through more frequent flooding (followed by permanent inundation of low-lying areas), and increased erosion of cliffs, bluffs, dunes, and beaches. Across California, accelerating sea level rise will cause an exponential increase in the frequency of coastal flooding events, doubling with approximately every two to four inches of sea level rise. Sea level rise could put 600,000 people at risk of flooding by the year 2100, and threaten $150 billion in property and infrastructure, including roadways, buildings, hazardous waste sites, power plants, and parks and tourist destinations. Coastal erosion could have a significant impact on California's ocean-dependent economy, which is the nation's largest, and estimated to exceed $45 billion per year. Critical infrastructure located on the shore, such as wastewater treatment plants, power stations, and transportation corridors, will also be affected. Sea level rise also pushes shallow groundwater closer to the surface, a process that may release contaminants buried in the soil.

235. Sea levels along the California coast have generally risen over the past century, except along the far north coast where uplift of the land surface has occurred due to the movement of the Earth's plates, as illustrated in the following chart.

[152] California's gross domestic product, or GDP, is the value of all goods and services produced in California.



** Relative to tidal datum (reference point set by the NOAA)*

Figure 24: Annual Mean Sea Level Trends

236. Coastal wave events and high tides, in combination with current and rising sea levels, will increase flood impacts on land, which will exacerbate the impact on coastal assets. Rising sea levels may also contaminate coastal groundwater aquifers and raise groundwater tables, causing increased flooding leading to impacts that will, among other things, further damage buried and low-lying infrastructure.

237. Coastal recreation and tourism are vulnerable to repeated and increasing disruptions from sea level rise, flooding, and erosion. Accelerated erosion and flooding diminish the number and quality of beaches. Beach closures have already occurred in California because of erosion and high storm surges, and such closures impact tourism and result in natural resource damage. Areas including some state parks and beaches will suffer further erosion due to sea level rise.

238. Rising water levels and increased storm activity will increase coastal erosion, impacting beaches and cliffs throughout the state. For example, a projected 31–67% of Southern California beaches are projected to completely erode by the end of the century if adaptation actions are not implemented.

239. Billions of dollars' worth of real estate development, primarily residential properties, line the California seashore. All of California's low-lying communities, as well as developments on cliffs, bluffs, dunes, or the beach itself, and their associated infrastructure, are vulnerable to

the impacts of a rising sea. King tides, and/or storm events—often accompanied by the simultaneous arrival of large waves—have already impacted many of these areas repeatedly.

240. Saltwater intrusion from sea level rise is also expected to impair water quality in coastal groundwater aquifers, as well as surface water supplies, as the salt front moves upstream. Water quality will also be degraded as rising sea levels submerge sewer discharge points, allowing contaminants to move into waterways and the surrounding environment. Industrial sites located in coastal areas will be at a greater risk of pollutant discharge into the State's waters.

241. Rising seas will inundate coastal infrastructure, including wastewater treatment plants and toxic cleanup sites where contaminants may be mobilized and risk spreading contamination to nearby vulnerable communities. Hundreds of such sites in the state are potentially vulnerable to impacts from sea level rise.

242. Sea level rise in California not only threatens coastal communities, but also threatens the health of the Sacramento-San Joaquin Delta, the heart of the California water supply system, the source of water for 25 million Californians and millions of acres of prime farmland, and essential habitat for imperiled native wildlife. Sea level rise in California could lead to flooding of low-lying areas, loss of coastal wetlands, saltwater contamination of drinking water, impacts on roads and bridges, and increased stress on levees. It may also require increased flows to prevent saltwater intrusion into the Bay-Delta system.

8. Ecosystem, Habitat, and Biodiversity Disruption

243. California is one of the most biologically diverse regions of the world, with the highest number of unique plant and animal species of all 50 states, and the greatest number of endangered species. Moreover, due to its diverse topographic, geologic, and climate conditions, California is one of 25 global biodiversity hotspots, where exceptional concentrations of endemic species are experiencing significant habitat loss. California's diverse climates are closely linked to the State's biodiversity; climate change is therefore expected to directly and indirectly impact California's terrestrial and marine habitats and species—and indeed already is impacting them.

244. Healthy ecosystems and biodiversity provide a plethora of direct and indirect benefits to Californians and the State's economy, such as clean air, clean water, crop pollination, and

recreational opportunities such as hunting, fishing, and wildlife viewing. These "ecosystem services" are tied to biodiversity and will therefore be negatively impacted by climate change.

245. Climate change can affect biodiversity in many ways. For example, species can be directly impacted, like salmon being exposed to warming stream temperatures that threaten their survival. Species can also be affected indirectly, through climate-induced changes in food, water, and habitat availability. Since ecosystems are highly interconnected, impacts to individual species often have consequences for other species within the system.

246. As a result of climate change, California has seen, and will continue to see, the following impacts on its ecosystems: shifts in species abundance and distributions; shifts in the timing of important life-cycle events such as pollination, flowering, breeding, and migration; the spread of invasive species and pests, which pose a threat to the survival of native species and usually disrupt ecosystem processes; and habitat loss and species extinctions. Throughout California, these types of changes have been observed across terrestrial, freshwater, estuarine, and marine ecosystems.

247. More specifically, some of the effects of climate change on habitat and biodiversity in California will include the following:

a. *Physiological stress on species due to changes in temperature and precipitation*. Warming temperatures, declining snowpack, and earlier spring snowmelt runoff create stresses on vegetation. This stress will cause shifts in geographic ranges, and will facilitate the spread of invasive species, pests (such as the bark beetle), pathogens, and diseases that affect ecosystems and species, and generally cause population declines. For example, tree deaths have increased dramatically in California since the 2012-2016 drought; approximately 129 million trees died in California between 2012 and 2017. Higher temperatures and decreased water availability made the trees more vulnerable to insects and pathogen attacks. Some of the most heavily impacted vegetation regions are predicted to be the Sierra Nevada foothills; the south coast, including Los Angeles and San Diego; the deserts; and potentially the coast ranges north of the San Francisco Bay Area. Similarly, in three study regions of the Sierra Nevada, the habitat

ranges of almost 75% of the small mammalian species and over 80% of the bird species surveyed were observed to have shifted compared to a century ago.

b. *Impacts to timing of species' lifecycle phases due to shifting timing of climatic events*. Changes in temperature, precipitation, food sources, competition for prey, and other physical or biological elements may cause detrimental alterations in the timing of key life cycle events for plants and animals, harming population health and further shifting the ranges where these plants and animals can survive. For example, some butterfly species emerge at the same time that their host plants flower. Warming temperatures are linked with earlier flowering times, and if butterflies and host plants are not able to adapt to a shifting climate at the same rate, butterflies may have insufficient food, and the host plants may lack pollinators. As another example, shifts in suitable climatic conditions for seedling establishment for two common California oak species have caused significant decreases in seedling "establishment windows," which is likely to bring about future population declines.

c. *Aquatic ecosystem and marine habitat impacts*. Shifts anticipated and already observed in precipitation and water flow patterns have negatively impacted water quality (e.g., due to sedimentation or algal blooms) and habitat suitability. As one example, harmful algal blooms are becoming more frequent and more intense across California as waters warm. These blooms, which result from the overgrowth of algae, caused 18 human illnesses and 444 animal illnesses in California in 2021 alone. Further, shifts in quantities of sediment in waterways have significant consequences, including declining water quality due to increases in contaminants such as pesticides, herbicides, nutrients, and mercury. Under current GHG emissions trajectories, 82% of native California freshwater fishes have an increased probability of becoming extinct by 2100; these include many species that are already at risk and listed as species of special concern or species that are endangered, including salmon and steelhead trout. In contrast, non-native species are thriving in the increasingly warm waters of California's rivers and reservoirs, taking the place of many native fishes. Further, ocean acidification and warming have a broad variety of effects, negatively impacting everything from copepods at the base of the food chain to Chinook salmon and sea lion pup births.

248. The State has 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 residents.

249. The scale of transformation needed over this decade to avoid the worst impacts of climate change is extraordinary. The State has made investments of a historic scale to advance the all-of-government approaches necessary to avert the worst impacts of climate change. For example, California's $52.2 billion Climate Change Commitment for 2021 through 2027 includes $10 billion for zero-emission vehicles, $2.1 billion for clean energy investments, $13.8 billion for programs that reduce emissions from the transportation sector, such as improving public transportation while also funding walking, biking, and adaptation projects, and $13.2 billion for wildfire risk reduction, drought mitigation, extreme heat resilience, and nature-based solutions.

250. The State has spent tens of billions of dollars to adapt to climate change and address the damages climate change has caused so far, and the State will need to spend multiples of that figure in the years to come.

251. Defendants' tortious and deceptive conduct was a substantial factor in bringing about these and other climate-related injuries suffered by the State, including harms to its infrastructure, environment, socioeconomic condition, and public health, that it has endured, and foreseeably will endure, due to the climate crisis. Moreover, the brunt of these injuries and harms will fall on frontline communities, as climate change exacerbates existing public health and environmental disparities.

252. Defendants' tortious and deceptive conduct as described herein is therefore an actual, direct, and proximate substantial-factor cause of the State's climate crisis-related injuries and brought about or helped to bring about those injuries. Such injuries include, but are not limited to, harms due to delayed responses to climate change caused by Defendants' behavior.

V. CAUSES OF ACTION

FIRST CAUSE OF ACTION

PUBLIC NUISANCE

(Civil Code Sections 3479, 3480, and 3494)

(Against All Defendants)

253. Plaintiff re-alleges and incorporates by reference the allegations in each of the preceding paragraphs as though fully set forth herein.

254. Under Civil Code section 3479, a "nuisance" is "anything which is injurious to health," including, but not limited to, "an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property," or anything which "unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake, or river, bay, stream, canal, or basin, or any public park, square, street, or highway."

255. Under Civil Code section 3480, a "public nuisance" is "one which affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal."

256. Pursuant to Civil Code section 3494, a "public nuisance may be abated by any public body or officer authorized thereto by law." As courts have recognized, the Attorney General is such a public officer authorized to bring an action in the name of the People of the State of California to abate a public nuisance.

257. Defendants, individually and in concert with each other, by their affirmative acts and omissions, have created, contributed to, and assisted in creating harmful climate-related conditions throughout California, including extreme heat, drought, increased wildfire risk, air pollution, flooding, damage to agriculture, sea level rise, coastal erosion, habitat destruction, and loss of ecosystems, with compounding effects in frontline communities. These climate-related harms are injurious to health, indecent and offensive to the senses, and obstruct the free use of property, so as to interfere with the comfortable enjoyment of life and property, and therefore constitute a nuisance.

258. Defendants, and each of them, created, caused, contributed to, and assisted in the creation of these and other climate-related harms in California by, among other things, affirmatively promoting the sale and use of fossil fuel products in California which Defendants knew would cause or exacerbate climate change and its impacts, including, without limitation extreme heat, drought, increased wildfire risk, public heath injuries, extreme weather, and sea level rise.

259. The climate-related harms that Defendants created, caused, contributed to, and assisted in the creation of, have substantially and unreasonably interfered with the exercise of rights common to the public, including the public health, the public safety, the public peace, the public comfort, and the public convenience. These interferences with public rights include, among other things, affirmatively promoting the sale and use of fossil fuel products in California, which Defendants knew would cause or exacerbate climate change and its impacts, including without limitation extreme heat, drought, increased wildfire risk, public health injuries, extreme weather, and sea level rise.

260. The climate-related harms that Defendants created, caused, contributed to, and assisted in the creation of, have substantially and unreasonably interfered with the exercise of rights common to the public, including the public health, the public safety, the public peace, the public comfort, and the public convenience. These interferences with public rights include, among other things:

a. Extreme heat events, which increase the risk of injury or death from dehydration, heat stroke, heart attack, and respiratory problems;

b. Frequent and severe droughts, which can result in drinking water shortages and land subsidence due to groundwater depletion;

c. Catastrophic wildfires, which destroy California's natural resources and residents' homes, while also emitting dangerous pollutants into the air and severely compromising air quality;

d. Increased smog from hotter temperatures, which damages lungs and increases rates of childhood asthma, respiratory and heart disease, and death, and which reduces visibility and obstructs scenic views;

e. Extreme winter storms, which cause flooding that can damage public infrastructure, obstructing the free passage and use of property;

f. Damage to agriculture, including reduced crop yields that could lead to food shortages;

g. Sea level rise, coastal inundation, and groundwater changes, which obstruct the free passage and use of roads and property, impair water quality in groundwater aquifers, damage critical public infrastructure such as power plants and airports, and lead to unprecedented and dangerous storm surges that can cause injury or even deaths; and

h. Significant disruptions to California's ecosystems and biodiversity, including the spread of invasive species and pests and the risk of extinction for California's native species.

261. The harms caused by Defendants' nuisance-creating conduct are extremely grave, and far outweigh the social utility of that conduct.

262. The climate-related harms that Defendants created, caused, contributed to, and assisted in the creation of are present throughout California, and therefore affect a considerable number of persons in California.

263. The climate-related harms that Defendants created, caused, contributed to, and assisted in the creation of continue to harm to the State and its people into the present day, and will continue to harm the State and its people many years into the future.

264. As a direct and proximate result of Defendants' acts and omissions, the State will be required to expend significant public resources to mitigate the impacts of climate-related harms throughout California.

265. As a direct and proximate result of Defendants' acts and omissions, Californians have sustained and will sustain injuries to public health, safety, and welfare; the loss of use and enjoyment of natural resources; and obstruction to the free use of property, harms for which Defendants are jointly and severally liable.

266. Defendants' acts and omissions have caused or threaten to cause injuries to people, properties, and natural resources in California that are indivisible.

267. The State seeks abatement of the public nuisance caused by Defendants.

268. The State requests that this Court order Defendants, and each of them jointly and severally, to abate the nuisance, including by making payments into an abatement fund to address the public nuisance.

SECOND CAUSE OF ACTION

ACTION FOR EQUITABLE RELIEF FOR POLLUTION, IMPAIRMENT, AND DESTRUCTION OF NATURAL RESOURCES

(Government Code Section 12607)

(Against All Defendants)

269. Plaintiff re-alleges and incorporates by reference the allegations in each of the preceding paragraphs as though fully set forth herein.

270. Government Code section 12607 authorizes the Attorney General to "maintain an action for equitable relief in the name of the People of the State of California against any person for the protection of the natural resources of the state from pollution, impairment, or destruction."

271. "Natural resource" is defined to include "land, water, air, minerals, vegetation, wildlife, silence, historic or aesthetic sites, or any other natural resource which, irrespective of ownership contributes, or in the future may contribute, to the health, safety, welfare, or enjoyment of a substantial number of persons, or to the substantial balance of an ecological community." (Gov. Code, § 12605.)

272. As a result of Defendants' misconduct, climate-related conditions are polluting, impairing, and destroying the State's natural resources.

273. As a result of Defendants' misconduct, climate-related conditions are polluting, impairing, and destroying "other natural resources" as described in the statute which, "irrespective of ownership contribute, or in the future may contribute, to the health, safety, welfare, or enjoyment of a substantial number of persons, or to the substantial balance of an ecological community." (Gov. Code, § 12605.)

274. This pollution, impairment, and destruction of natural resources, including water, wildlife, and other natural resources, is continuing in nature.

275. Defendants, and each of them, have engaged in and continue to engage in, conduct that caused or contributed to the pollution, impairment, and destruction of natural resources, including water resources, wildlife, and other natural resources. The acts and practices engaged in by Defendants that polluted, impaired, and destroyed natural resources include the following:

a. affirmatively and knowingly promoting the sale and use of fossil fuel products in California which Defendants knew would cause or exacerbate climate change and its impacts, including extreme heat, drought, extreme weather, and sea level rise;

b. affirmatively and knowingly concealing the hazards that Defendants knew would result from the use of their fossil fuel products by misrepresenting and casting doubt on the integrity of scientific information related to climate change;

c. affirmatively promoting fossil fuel products for uses that Defendants knew would be dangerous and cause harm to consumers, the public, and the State;

d. disseminating and funding the dissemination of information intending to mislead customers, consumers, lawmakers, and the public regarding the known and foreseeable risks of climate change and its consequences that follow from the normal, intended use of fossil fuel products;

e. delaying the development of viable clean energy alternatives by preventing customers, the media, policymakers, and the public from having access to full and accurate information material to their energy purchasing decisions, thereby causing the emission of vast quantities of greenhouse gases into the atmosphere;

f. failing to warn the public about the hazards associated with the use of fossil fuel products; and

g. deceptively marketing their products as environmentally beneficial or benign when in reality those products contribute to climate change and are harmful to the health of the planet and its people.

276. Defendants' acts and omissions have caused pollution, impairment, and destruction of California's natural resources, including water, wildlife, and other natural resources that are indivisible.

277. Pursuant to Government Code section 12607, the State requests that this Court grant temporary and permanent equitable relief and impose such conditions upon Defendants as are required to protect the natural resources of California from pollution, impairment, or destruction.

278. Pursuant to Government Code section 12610, the State requests that this Court grant any and all temporary and permanent equitable relief needed to prevent further pollution, impairment and destruction of the natural resources of California, including the imposition of such conditions upon the Defendants as are required to protect the natural resources of California from pollution, impairment, or destruction.

THIRD CAUSE OF ACTION

UNTRUE OR MISLEADING ADVERTISING

(Business and Professions Code Section 17500)

(Against All Defendants)

279. Plaintiff re-alleges and incorporates by reference the allegations in each of the preceding paragraphs as though fully set forth herein.

280. Defendants, and each of them, have engaged in and continue to engage in acts or practices that constitute violations of the False Advertising Law, Business and Professions Code section 17500 et seq.

281. Defendants, with the intent to induce members of the public to purchase and utilize fossil fuel products, made or caused to be made and/or disseminated misleading statements concerning the fossil fuels, which Defendants knew, or by the exercise of reasonable care should have known, were untrue or misleading at the time they were made. Such misrepresentations include, but are not limited to:

a. Deceptively marketing fossil fuel products claimed to be "low carbon," "emissions-reducing," "clean" and/or "green," or otherwise environmentally beneficial or benign,

when in reality those products contribute to climate change and are harmful to the health of the planet and its people;

b. Deceptively promoting natural gas as a climate-friendly or environmentally friendly fuel, and/or as "clean" or "cleaner" than other fossil fuels, when in reality natural gas contributes to climate change and is harmful to the health of the planet and its people;

c. Deceptively marketing their companies and their products as contributing to solutions to climate change when in reality their investments in clean energy and alternative fuels pale in comparison to their investments in expanding fossil fuel production, and those alternative fuels, such as natural gas, contribute to climate change; and

d. Misleadingly promoting their companies as being in alignment with international goals to reduce carbon emissions and reach net-zero emissions, when in reality they are investing in maintaining and/or expanding their fossil fuel businesses.

FOURTH CAUSE OF ACTION

MISLEADING ENVIRONMENTAL MARKETING

(Business and Professions Code Section 17580.5)

(Against All Defendants)

282. Plaintiff re-alleges and incorporates by reference the allegations in each of the preceding paragraphs as though fully set forth herein.

283. Defendants, and each of them, have made environmental marketing claims that are untruthful, deceptive, and/or misleading, whether explicitly or implicitly, in violation of Business and Professions Code section 17580.5.

284. Such misleading environmental marketing claims include, but are not limited to, such deceptive representations as:

a. Deceptively marketing fossil fuel products claimed to be "low carbon," "emissions-reducing," "clean" and/or "green," or otherwise environmentally beneficial or benign, when in reality those products contribute to climate change and are harmful to the health of the plant and its people;

b. Deceptively promoting natural gas as a climate-friendly or environmentally friendly fuel, and/or as "clean" or "cleaner" than other fossil fuels, when in reality natural gas contributes to climate change and is harmful to the health of the planet and its people;

c. Deceptively marketing their companies and their products as contributing to solutions to climate change when in reality their investments in clean energy and alternative fuels pale in comparison to their investments in expanding fossil fuel production, and those alternative fuels, such as natural gas, contribute to climate change; and

d. Misleadingly promoting their companies as being in alignment with international goals to reduce carbon emissions and reach net-zero emissions, when in reality they are investing in maintaining and/or expanding their fossil fuel businesses.

FIFTH CAUSE OF ACTION

UNLAWFUL, UNFAIR, OR FRAUDULENT BUSINESS PRACTICES

(Business and Professions Code Section 17200)

(Against All Defendants)

285. Plaintiff re-alleges and incorporates by reference the allegations in each of the preceding and following paragraphs as though fully set forth herein.

286. Defendants have engaged in and continue to engage in unlawful, unfair, or fraudulent business acts or practices and unfair, deceptive, untrue, or misleading advertising that constitutes unfair competition as defined in the Unfair Competition Law, Business and Professions Code section 17200 et seq.

287. Defendants committed unlawful acts in violation of the Unfair Competition Law by, among other things:

a. Affirmatively promoting the use of fossil fuels while knowing that fossil fuels would lead to devastating consequences on the climate, and affirmatively misleading the public and casting doubt on climate science, thereby creating or assisting in the creation of a public nuisance, as alleged in the First Cause of Action;

b. Engaging in conduct that caused or contributed to the pollution, impairment, and destruction of natural resources in violation of Government Code section 12607, as alleged in the Second Cause of Action;

c. Disseminating untrue and misleading statements to the public in violation of Business and Professions Code section 17500, as alleged in the Third Cause of Action;

d. Making misleading environmental marketing claims in violation of Business and Professions Code section 17580.5, as alleged in the Fourth Cause of Action; and

e. Failing to warn consumers of the known risks of fossil fuel use in violation of common law, as alleged in the Sixth and Seventh Causes of Action, which follow and which Plaintiff incorporates by reference herein.

SIXTH CAUSE OF ACTION

STRICT PRODUCTS LIABILITY

(Failure to Warn)

(Against All Fossil Fuel Defendants)

288. Plaintiff re-alleges and incorporates by reference the allegations in each of the preceding paragraphs as though fully set forth herein.

289. At all relevant times the Fossil Fuel Defendants, and each of them, extracted, refined, formulated, designed, packaged, manufactured, merchandised, advertised, promoted, and/or sold fossil fuel products, which were intended by the Fossil Fuel Defendants to be combusted for energy, refined into petrochemicals, and refined and/or incorporated into petrochemical products including fuels and plastics. The Fossil Fuel Defendants placed these fossil fuel products into the stream of commerce.

290. The Fossil Fuel Defendants, and each of them, heavily marketed, promoted, and advertised fossil fuel products and their derivatives, which were sold or used by their respective affiliates and subsidiaries. The Fossil Fuel Defendants received direct financial benefit from their affiliates' and subsidiaries' sales of fossil fuel products. The Fossil Fuel Defendants' roles as promoters and marketers were integral to their respective businesses and a necessary factor in bringing fossil fuel products and their derivatives to the consumer market, such that the Fossil

Fuel Defendants had control over, and a substantial ability to influence, the manufacturing and distribution processes of their affiliates and subsidiaries.

291. Throughout the times at issue, the Fossil Fuel Defendants individually and collectively knew or should have known that fossil fuel products, whether used as intended or used in a foreseeable manner, release greenhouse gases into the atmosphere, inevitably causing, among other things, global warming, heat waves, more frequent and extreme droughts, precipitation events, sea level rise, and the associated consequences of those physical and environmental changes.

292. Throughout the times at issue and continuing today, fossil fuel products presented, and still present, a substantial danger to the State and its people through the climate harms described herein, whether used as intended or used in a reasonably foreseeable manner.

293. Throughout the times at issue, the ordinary consumer would not recognize that the use of fossil fuel products causes global and localized changes in climate, and consequent injuries to California, its communities, and its resources, as described herein.

294. Throughout the times at issue, the Fossil Fuel Defendants individually and in concert widely disseminated false, and misleading marketing materials; cast doubt upon the consensus on climate change within the scientific community at the time; advanced pseudo-scientific theories of their own; and developed public relations campaigns and materials that prevented reasonable consumers from recognizing the risk that fossil fuel products would cause grave climate harms, including those described herein.

295. Notwithstanding the Fossil Fuel Defendants' superior knowledge of the risks posed by their fossil fuel products, the Fossil Fuel Defendants, and each of them, failed to adequately warn customers, consumers, elected officials, and regulators of the known and foreseeable risks of climate change and the consequences that inevitably follow from the normal, intended use of the Fossil Fuel Defendants' fossil fuel products.

296. Any warnings that the Fossil Fuel Defendants might have disseminated were rendered ineffective and inadequate by their false and misleading public statements about the dangers of

their fossil fuel products, and their widespread and longstanding efforts to conceal and misrepresent the dangers inherent in the use of their fossil fuel products.

297. Had the Fossil Fuel Defendants provided adequate warnings, their fossil fuel products would not have had widespread acceptance in the marketplace, and alternatives to fossil fuel products would have been developed sooner. In addition, if the Fossil Fuel Defendants had adequately warned of the adverse impacts to public health and the environment caused by the ordinary and foreseeable use of their fossil fuel products, the State and its residents would have taken measures to avoid or lessen those impacts in California.

298. The Fossil Fuel Defendants' acts and omissions as alleged herein are indivisible causes of the State's injuries as alleged herein.

299. The Fossil Fuel Defendants' wrongful conduct was oppressive, malicious, and fraudulent, in that their conduct was willful, intentional, and in conscious disregard for the rights of others. Defendants' conduct was so vile, base, and contemptible that it would be looked down upon and despised by reasonable people, justifying an award of punitive and exemplary damages, in an amount subject to proof.

300. As a direct and proximate result of the Fossil Fuel Defendants' failure to warn, their fossil fuel products caused the State to sustain the injuries and damages set forth in this Complaint, and will cause future injuries and damages to State as set forth in this Complaint, including, without limitation, damage to State property, State infrastructure, and natural resources. The State seeks compensatory damages for these injuries in an amount subject to proof.

SEVENTH CAUSE OF ACTION

NEGLIGENT PRODUCTS LIABILITY

(Failure to Warn)

(Against All Fossil Fuel Defendants)

301. Plaintiff re-alleges and incorporates by reference the allegations in each of the preceding paragraphs as though fully set forth herein.

302. At all relevant times the Fossil Fuel Defendants, and each of them, extracted, refined, formulated, designed, packaged, manufactured, merchandised, advertised, promoted, and/or sold fossil fuel products, which were intended by the Fossil Fuel Defendants to be combusted for energy, refined into petrochemicals, and refined and/or incorporated into petrochemical products including fuels and plastics. The Fossil Fuel Defendants placed these fossil fuel products into the stream of commerce.

303. The Fossil Fuel Defendants, and each of them, heavily marketed, promoted, and advertised fossil fuel products and their derivatives, which were sold or used by their respective affiliates and subsidiaries. The Fossil Fuel Defendants received direct financial benefit from their affiliates' and subsidiaries' sales of fossil fuel products. The Fossil Fuel Defendants' roles as promoters and marketers were integral to their respective businesses and a necessary factor in bringing fossil fuel products and their derivatives to the consumer market, such that the Fossil Fuel Defendants had control over, and a substantial ability to influence, the manufacturing and distribution processes of their affiliates and subsidiaries.

304. Throughout the times at issue, the Fossil Fuel Defendants individually and collectively knew or should have known that fossil fuel products, whether used as intended or in a foreseeable manner, release greenhouse gases into the atmosphere, inevitably causing, among other things, global warming, more frequent and extreme heat waves, more frequent and extreme droughts, injuries to public health, more frequent and extreme precipitation events, sea level rise, and the associated consequences of those physical and environmental changes.

305. Throughout the times at issue and continuing today, fossil fuel products presented and still present a substantial danger to the State and its people through the climate effects described herein, whether used as intended or in a reasonably foreseeable manner.

306. Throughout the times at issue, the ordinary consumer would not recognize that the use of fossil fuel products causes global and localized changes in climate, and consequent injuries to California, its communities, and its resources, as described herein.

307. Throughout the times at issue, the Fossil Fuel Defendants individually and in concert widely disseminated false and misleading marketing materials; cast doubt in the public's mind

about the consensus on climate change within the scientific community at the time; advanced pseudo-scientific theories of their own; and developed public relations campaigns and materials that prevented reasonable consumers from recognizing the risk that fossil fuel products would cause grave climate changes, including those described herein.

308. Notwithstanding the Fossil Fuel Defendants' superior knowledge of the risks posed by their fossil fuel products, the Fossil Fuel Defendants, and each of them, failed to adequately warn customers, consumers, elected officials, and regulators, including in California, of the known and foreseeable risks of climate change and the consequences that inevitably follow from the normal, intended use of the Fossil Fuel Defendants' fossil fuel products.

309. Given the grave dangers caused by normal or foreseeable use of fossil fuel products as described herein, a reasonable extractor, refiner, formulator, designer, manufacturer, merchandiser, advertiser, promoter, or seller responsible for introducing fossil fuel products into the stream of commerce, would have warned of those known and inevitable climate effects.

310. Any warnings that the Fossil Fuel Defendants might have disseminated were rendered ineffective and inadequate by their false and misleading public statements about the dangers of their fossil fuel products, and their widespread and longstanding efforts to conceal and misrepresent the dangers inherent in the use of their fossil fuel products.

311. Had the Fossil Fuel Defendants provided adequate warnings, their fossil fuel products would not have had widespread acceptance in the marketplace, and alternatives to fossil fuel products would have been developed sooner. In addition, if the Fossil Fuel Defendants had adequately warned of the adverse impacts to public health and the environment caused by the ordinary and foreseeable use of their fossil fuel products, the State and its residents would have taken measures to avoid or lessen those impacts in California.

312. The Fossil Fuel Defendants' acts and omissions as alleged herein are indivisible causes of the State's injuries as alleged herein.

313. The Fossil Fuel Defendants' wrongful conduct was oppressive, malicious, and fraudulent, in that their conduct was willful, intentional, and in conscious disregard for the rights of others. Defendants' conduct was so vile, base, and contemptible that it would be looked down

upon and despised by reasonable people, justifying an award of punitive and exemplary damages in an amount subject to proof.

314. As a direct and proximate result of the Fossil Fuel Defendants' failure to warn, their fossil fuel products caused the State to sustain the injuries and damages set forth in this Complaint, and will cause future injuries and damages to State as set forth in this Complaint, including, without limitation, damage to State property, State infrastructure, and natural resources. The State seeks compensatory damages for these injuries in an amount subject to proof.

VI. PRAYER FOR RELIEF

WHEREFORE, the State respectfully requests that the Court enter judgment in favor of the State and against Defendants, jointly and severally, as follows:

1. Compelling Defendants to abate the ongoing public nuisance their conduct has created in California, including by establishing and contributing to an abatement fund to pay the costs of such abatement;

2. Granting any and all temporary and permanent equitable relief and imposing such conditions upon the Defendants as are required to protect and/or prevent further pollution, impairment and destruction of the natural resources of California, including the imposition of such conditions upon the Defendants as are required to protect the natural resources of California from pollution, impairment, or destruction, pursuant to Government Code sections 12607 and 12610;

3. Pursuant to Business and Professions Code section 17535, entering all orders necessary to prevent Defendants, along with Defendants' successors, agents, representatives, employees, and all persons who act in concert with Defendants, from making any false or misleading statements in violation of Business and Professions Code section 17500 or 17580.5;

4. Pursuant to Business and Professions Code section 17203, entering all orders necessary to prevent Defendants, along with Defendants' successors, agents, representatives, employees, and all persons who act in concert with Defendants, from engaging in any act or

practice that constitutes unfair competition in violation of Business and Professions Code section 17200;

5. Pursuant to Business and Professions Code section 17535, entering all orders or judgments as may be necessary to restore to any person in interest any money or other property that Defendants may have acquired by violations of Business and Professions Code section 17500 or 17580.5;

6. Pursuant to Business and Professions Code section 17203, entering all orders or judgments as may be necessary to restore to any person in interest any money or other property that Defendants may have acquired by violations of Business and Professions Code section 17200;

7. Pursuant to Business and Professions Code section 17536, assessing a civil penalty of two thousand five hundred dollars ($2,500) against Defendants for each violation of Business and Professions Code section 17500, as proved at trial;

8. Pursuant to Business and Professions Code section 17536, assessing a civil penalty of two thousand five hundred dollars ($2,500) against Defendants for each violation of Business and Professions Code section 17580.5, as proved at trial;

9. Pursuant to Business and Professions Code section 17206, assessing a civil penalty of two thousand five hundred dollars ($2,500) against Defendants for each violation of Business and Professions Code section 17200, as proved at trial;

10. Pursuant to Government Code section 12527.6, awarding disgorgement in an amount according to proof;

11. Awarding compensatory damages in an amount according to proof;

12. Awarding punitive and exemplary damages in an amount according to proof;

13. Awarding to the Attorney General all costs of investigating and prosecuting the public nuisance cause of action pursuant to Civil Code section 3494 and Government Code section 12607 cause of action, including expert fees, reasonable attorney's fees, and costs in an amount according to proof pursuant to Code of Civil Procedure section 1021.8;

14. Ordering that the State recover its costs of suit, including costs of investigation;

15. Ordering that the State receive all other relief to which it is legally entitled; and

16. Awarding such other relief that the Court deems just, proper, and equitable.

17. Notwithstanding the foregoing, the Counties of San Mateo, Marin, and Santa Cruz, the Cities of Richmond, Imperial Beach, Santa Cruz, Oakland, and the City and County of San Francisco (collectively, Local Entities) have filed pending actions against various fossil fuel industry defendants for creating, contributing to, and/or assisting in the creation of climate change-related harms within their respective jurisdictions (collectively, Pending Local Actions).[153] The geographic areas covered by any claim or theory of recovery asserted by any Local Entity in the Pending Local Actions are excluded from, and not subsumed by, this action, except as to state-owned property and assets, and except as to harms or violations for which the State has exclusive authority to recover damages or obtain injunctive relief. Nothing herein shall be construed as abrogating the State's jurisdiction, duties, or obligations as a trustee of state resources, or permitting and regulatory authority under existing law over lands located within or outside the Local Entities' geographic limits.

VII. REQUEST FOR JURY TRIAL

Plaintiff respectfully requests that all issues presented by the above Complaint be tried by a jury, with the exception of those issues that, by law, must be tried before the Court.

[153] The Pending Local Actions are as follows: *People of the State of California & County of San Mateo v. Chevron et al.* (San Mateo Super. Ct., No. 17-CIV-03222); *People of the State of California & County of Marin v. Chevron et al.* (Marin Super. Ct., No. CIV1702586); *People of the State of California & City of Imperial Beach v. Chevron et al.* (Contra Costa Super. Ct., No. MSC17-01227); *People of the State of California & City of Santa Cruz v. Chevron et al.* (Santa Cruz Super. Ct., No. 17CV03243); *People of the State of California & County of Santa Cruz v. Chevron et al.* (Santa Cruz Super. Ct., No. 17CV03242); *People of the State of California & City of Richmond v. Chevron et al.* (Contra Costa Super. Ct., No. MSC18-00055); *People of the State of California by and through the City Attorney for the City and County of San Francisco & City and County of San Francisco v. BP et al.* (S.F. Super. Ct., No. CGC-17-561370); and *People of the State of California by and through the City Attorney for the City of Oakland & City of Oakland v. BP et al.* (Alameda Super. Ct., No. RG17875889).

Dated: June 10, 2024

Respectfully submitted,

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