UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON
AT SEATTLE

KING COUNTY,

Plaintiff,

v.

BP P.L.C., a public limited company of England and Wales, CHEVRON CORPORATION, a Delaware corporation, CONOCOPHILLIPS, a Delaware corporation, EXXON MOBIL CORPORATION, a New Jersey corporation, ROYAL DUTCH SHELL PLC, a public limited company of England and Wales, and DOES 1 through 10,

Defendants.

Case No. C18-758RSL

FIRST AMENDED COMPLAINT

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I. INTRODUCTION

1. Global warming is here and it is harming King County now as King County is already experiencing the impacts of a changing climate: warming temperatures, acidifying marine waters, rising seas, increasing flooding risk, decreasing mountain snowpack, and less water in the summer. Climate change will have long-term consequences for the economy, the environment, and public health and safety in King County. The rapidly rising sea level along the Pacific coast poses an imminent threat of storm surge flooding putting areas of King County at risk of inundation. This threat to human safety and to public and private property is becoming more urgent every day as global warming reaches ever more dangerous levels. King County must take abatement action to protect public and private property from this threat.

2. This egregious state of affairs is no accident. Rather, it is an unlawful public nuisance of the first order. Defendants are the five largest investor-owned fossil fuel corporations in the world as measured by their historic production of fossil fuels. The use of fossil fuels—oil, natural gas, and coal—is the primary source of the greenhouse gas pollution that causes global warming, a point that scientists settled years ago.[1] Defendants have produced massive amounts of fossil fuels for many years. Recent disclosures of internal industry documents demonstrate that they have done so despite knowing—since at least the 1980s—that massive fossil fuel usage would cause dangerous global warming. It was at that time that scientists on their staffs or with whom they consulted through their trade association, the American Petroleum Institute ("API"), investigated the science and warned in stark terms that fossil fuel usage would cause global warming at a rate unprecedented in the history of human civilization and present risks of "catastrophic" harm in coming decades.

3. Defendants took these stark warnings and proceeded to double-down on fossil fuels. Most of the carbon dioxide now in the atmosphere as a result of combustion of

[1] *See, e.g.*, Carbon Dioxide and Climate: A Scientific Assessment, Report of an Ad Hoc Study Group on Carbon Dioxide and Climate to the Climate Research Board, Assembly of Mathematical and Physical Sciences, National Research Council (1979), at vii, 4-6, available at https://www.nap.edu/catalog/12181/carbon-dioxide-and-climate-a-scientific-assessment.

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Defendants' fossil fuels is likely attributable to their recent production—*i.e.*, to fossil fuels produced by Defendants since 1980. Even today, with the global warming danger level at a critical phase, Defendants continue to engage in massive fossil fuel production and execute long-term business plans to continue and even expand their fossil fuel production for decades into the future.

4. The consequences of global warming from past fossil fuel usage is an irreversible condition on any relevant time scale: it will last hundreds or even thousands of years. Defendants' planned production of fossil fuels into the future will exacerbate global warming and require greater and more costly abatement actions to protect King County.

5. Defendants, notably, did not simply produce fossil fuels. They engaged in large-scale, sophisticated advertising and communications campaigns to promote pervasive fossil fuel usage and to portray fossil fuels as environmentally responsible and essential to human well-being—even as they knew that their fossil fuels would contribute, and subsequently were contributing, to dangerous global warming. These promotional efforts continue through today even in the face of overwhelming scientific evidence that fossil fuels are altering the climate and global warming has become an existential threat to modern life.

6. Defendants' promotion of fossil fuels has also entailed denying mainstream climate science or downplaying the risks of global warming. During the 1990s and early 2000s, Defendants stole a page from the Big Tobacco playbook and sponsored communications campaigns, either directly or through the API or other groups, to deny and discredit the mainstream scientific consensus on global warming, downplay the risks of global warming, and even to launch unfounded attacks on the integrity of leading climate scientists. "Uncertainty" of the science became the constantly repeated mantra of this Big Oil communications campaign just as "Doubt is our product" was the Big Tobacco communications theme. Emphasizing "uncertainty" in climate science, directly or through the API, is still a focus of Defendants' efforts to promote their products even though Defendants are well aware that the fundamental scientific facts of global warming are not in dispute and are a cause of grave danger.

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7. The purpose of all this promotion of fossil fuels and efforts to undermine mainstream climate science was, like all marketing, to increase sales and protect market share. It succeeded.

8. Scientific analysis shows that the costs of dealing with global warming will be staggering for the public entities that must protect their people and their coastlines. As King County noted in its 2015 Strategic Climate Action Plan ("2015 SCAP"): "Even if global and GHG [greenhouse gas] emissions decrease dramatically, many climate change impacts are now inevitable and preparation for those changes is essential." King County has a long standing commitment to preparing for the impacts of climate change. Climate change is causing King County to prepare for impacts on wastewater treatment and conveyance facilities, roads and bridges, the King County International Airport, storm water management, flood risk, public health, emergency management, and salmon recovery.[2] The magnitude of the actions needed to abate harms from climate change, and the amount of property at risk, will only increase.

9. Defendants are substantial contributors to the public nuisance of global warming that is causing injury to Plaintiff and thus are jointly and severally liable. Defendants' cumulative production of fossil fuels over many years places each of them among the top sources of global warming pollution in the world. And each Defendant is committed to massive fossil fuel production well into the future. These contributions to atmospheric greenhouse gas loading from Defendants' products contributes measurably to global warming.

10. Plaintiff seeks compensatory damages and an order requiring Defendants to abate the global warming-induced nuisance to which they have contributed by funding an abatement program to build infrastructure and finance programs that are urgently needed to protect human safety and public and private property in King County. Plaintiff does not seek to impose liability on Defendants for their direct emissions of greenhouse gases and does not seek to restrain Defendants from engaging in their business operations, including in foreign countries. This

[2] 2015 SCAP at 98, available at http://your.kingcounty.gov/dnrp/climate/documents/2015_King_County_SCAP-Full_Plan.pdf.

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lawsuit does not seek to control energy policy in the United States or on foreign soil. Nor does Plaintiff seek to impose any liability for lobbying activity; to the extent any particular promotional activity might have had dual goals of both promoting a commercial product in the marketplace and influencing policy, Plaintiff invokes such activities for the purpose of the former, not the latter, and/or as evidence relevant to show Defendants' knowledge of the dangerous nature of their products. This case is, fundamentally, about shifting the costs of abatement back onto the companies. After all, it is Defendants who have profited and will continue to profit by knowingly contributing to global warming, thereby doing all they can to help create and maintain a profound public nuisance.

II. PARTIES

A. Plaintiff

11. Plaintiff King County ("King County" or "County") is a Washington county organized and existing under and by virtue of the laws of the State of Washington, RCW 36.01, *et seq*. King County owns and manages property and structures that are currently impacted and threatened by global warming.

B. Defendants

12. Defendant BP p.l.c. ("BP") is a public limited company registered in England and Wales with its headquarters in London, England, doing business in Washington. BP was created in 1998 as a result of a merger between the Amoco Corporation ("Amoco"), a former U.S. corporation, and the British Petroleum Company p.l.c. BP is a publicly traded, multinational, vertically integrated oil and gas company that explores for, produces, refines, markets, and sells oil, natural gas, and fossil fuel products. On information and belief, Amoco Corporation (which merged into a predecessor of BP in approximately 1998), Atlantic Richfield Company (which merged into a predecessor of BP in approximately 2000), and BP America Inc. (a BP subsidiary

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that BP describes in an SEC filing as its "chief representative in the US" and "our agent in the US") were members of the API at all relevant times.[3]

13. BP controls company-wide climate change policies and fossil fuel production.[4] BP, through its employees and/or agents, manages, directs, conducts, and/or controls operations relating to its subsidiaries' participation in the process by which fossil fuels, including raw crude oil, are produced, transported, refined, stored, distributed, marketed, and/or sold to consumers. BP also exercises control over company-wide decisions on production and use of fossil fuel reserves considering climate change impacts. BP's management, direction, conduct, and/or control is exercised through a variety of means, including through its employees' and/or agents' implementation of policies, procedures, and programs relating to climate change generally and to production of fossil fuels specifically. BP states in its annual report for 2017 that the BP "group explores for oil and natural gas under a wide range of licensing, joint arrangement and other contractual agreements," and that "[a]ll subsidiary undertakings are controlled by the group."[5]

14. As a result of its management, direction, conduct, and/or control of operations relating to company-wide climate change policies and fossil fuel production, Defendant BP is responsible for its subsidiaries' past and current production and promotion of fossil fuel products.

15. Defendant Chevron Corporation ("Chevron") is a Delaware Corporation with its principal place of business located in San Ramon, California, doing business in Washington. Chevron is a publicly traded, multinational, vertically integrated oil and gas company that

[3] *See* BP P.L.C., ANNUAL REPORT AND FORM 20-F 2016 59, 290, *available at* https://www.sec.gov/Archives/edgar/data/313807/000119312517112384/d248481d20f.htm.

[4] BP Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 1, formerly available at https://www.bp.com/content/dam/bp/en/corporate/pdf/sustainability-report/group-reports/bp-cdp-submission-2016.pdf, now available at https://web.archive.org/web/20170713134246/https://www.bp.com/content/dam/bp/en/corporate/pdf/sustainability-report/group-reports/bp-cdp-submission-2016.pdf.

[5] BP Annual Report and Form 20-F 2017 at 29, 231, available at https://www.bp.com/content/dam/bp/en/corporate/pdf/investors/bp-annual-report-and-form-20f-2017.pdf.

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explores for, produces, refines, markets, and sells oil, natural gas, and fossil fuel products. On information and belief, Chevron has been a member of the API at all relevant times.

16. Chevron controls company-wide climate change policies and fossil fuel production.[6] Chevron, through its employees and/or agents, manages, directs, conducts, and/or controls operations relating to its subsidiaries' participation in the process by which fossil fuels, including raw crude oil, are produced, transported, refined, stored, distributed, marketed, and/or sold to consumers. Chevron also exercises control over company-wide decisions on production and use of fossil fuel reserves considering climate change impacts. Chevron's management, direction, conduct, and/or control is exercised through a variety of means, including through its employees' and/or agents' implementation of policies, procedures, and programs relating to climate change generally and to production of fossil fuels specifically.

17. As a result of its management, direction, conduct, and/or control of operations relating to company-wide climate change policies and fossil fuel production, Defendant Chevron is responsible for its subsidiaries' past and current production and promotion of fossil fuel products.

18. Defendant ConocoPhillips is a Delaware Corporation with its principal place of business located in Houston, Texas, doing business in Washington. ConocoPhillips is a publicly traded, multinational oil and gas company that produces, markets, and sells oil and natural gas and for many years was a multinational, vertically integrated oil and gas company that also refined and sold finished oil products. On information and belief, Conoco Inc. and Phillips Petroleum Company (the two companies which merged to become ConocoPhillips in 2002) were members of the API at all relevant times.

19. ConocoPhillips controls company-wide climate change policies and fossil fuel production.[7] ConocoPhillips, through its employees and/or agents, manages, directs, conducts,

[6] Chevron Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 2, available at https://www.chevron.com/-/media/chevron/corporate-responsibility/documents/CDP-2016.pdf.

[7] ConocoPhillips Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 2, available at https://www.cdp.net/en/companies.

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and/or controls operations relating to its subsidiaries' participation in the process by which fossil fuels, including raw crude oil, are produced, transported, refined, stored, distributed, marketed, and/or sold to consumers. ConocoPhillips also exercises control over company-wide decisions on production and use of fossil fuel reserves considering climate change impacts. ConocoPhillips's management, direction, conduct, and/or control is exercised through a variety of means, including through its employees' and/or agents' implementation of policies, procedures, and programs relating to climate change generally and to production of fossil fuels specifically.

20. As a result of its management, direction, conduct, and/or control of operations relating to company-wide climate change policies and fossil fuel production, Defendant ConocoPhillips is responsible for its subsidiaries' past and current production and promotion of fossil fuel products.

21. Defendant Exxon Mobil Corporation ("Exxon") is a New Jersey corporation with its principal place of business located in Irving, Texas, doing business in the State of Washington. Exxon is a publicly traded, multinational, vertically integrated oil and gas company that explores for, produces, refines, markets, and sells oil, natural gas, and fossil fuel products and, as recently as 2009, produced, marketed, and sold coal. On information and belief, Exxon Company (an Exxon subsidiary) and Mobil Corporation (which merged into Exxon Corporation to form Defendant Exxon Mobil Corporation in 1999) were members of the API at all relevant times.

22. Exxon controls company-wide climate change policies and fossil fuel production.[8] Exxon, through its employees and/or agents, manages, directs, conducts, and/or controls operations relating to its subsidiaries' participation in the process by which fossil fuels, including raw crude oil, are produced, transported, refined, stored, distributed, marketed, and/or sold to consumers. Exxon also exercises control over company-wide decisions on production and use of

[8] Exxon Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 1, available at http://cdn.exxonmobil.com/~/media/global/files/energy-and-environment/2016-cdp-response.pdf.

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fossil fuel reserves considering climate change impacts. Exxon's management, direction, conduct, and/or control is exercised through a variety of means, including through its employees' and/or agents' implementation of policies, procedures, and programs relating to climate change generally and to production of fossil fuels specifically.

23. As a result of its management, direction, conduct, and/or control of operations relating to company-wide climate change policies and fossil fuel production, Defendant Exxon is responsible for its subsidiaries' past and current production and promotion of fossil fuel products.

24. Defendant Royal Dutch Shell plc ("Shell") is a public limited company registered in England and Wales with its headquarters in The Hague, Netherlands, doing business in Washington. Shell is a publicly traded, multinational, vertically integrated oil and gas company that explores for, produces, refines, markets, and sells oil, natural gas and fossil fuel products. On information and belief, Shell Oil Company was a member of the API at all relevant times, including the 1980s in particular. Shell Oil Company is Defendant Shell's main U.S. subsidiary; its president is Defendant Shell's "U.S. Country Chair."[9]

25. Shell controls company-wide climate change policies and fossil fuel production.[10] Shell, through its employees and/or agents, manages, directs, conducts, and/or controls operations relating to its subsidiaries' participation in the process by which fossil fuels, including raw crude oil, are produced, transported, refined, stored, distributed, marketed, and/or sold to consumers. Shell also exercises control over company-wide decisions on production and use of fossil fuel reserves considering climate change impacts. Shell's management, direction, conduct, and/or control is exercised through a variety of means, including through its employees' and/or agents' implementation of policies, procedures, and programs relating to climate change generally and to production of fossil fuels specifically.

[9] Shell U.S., *Our Leaders*, https://www.shell.us/about-us/who-we-are/our-leaders.html (last visited July 16, 2018).

[10] Shell Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 2, available at https://www.cdp.net/en/companies.

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26. As a result of its management, direction, conduct, and/or control of operations relating to company-wide climate change policies and fossil fuel production, Defendant Shell is responsible for its subsidiaries' past and current production and promotion of fossil fuel products.

27. Defendants DOES ONE through TEN are sued herein under fictitious names. Plaintiff does not at this time know the true names or capacities of said defendants, but prays that the same may be alleged when ascertained.

C. Defendants' connections to Washington

28. Defendants have contributed to the creation of a public nuisance causing severe harms and threatening catastrophic harm in King County. All of the Defendants' long-standing and extensive contacts with Washington, described below, have furthered and supported their production, marketing, and sale of massive quantities of fossil fuels and fossil fuel products, which has injured, and continues to injure, King County.

29. Each Defendant, directly and through its subsidiaries and agents, substantially participates in the process by which raw crude oil is extracted from the ground, refined into fossil fuel products, including finished gasoline products, and delivered, marketed, and sold to Washington residents for use. For example, and as described in more detail below, Defendants intentionally created a fungible and commingled gasoline product in order to be able to utilize a common distribution system that moves gasoline from refineries through pipelines to terminals (large storage tanks). Trucks then transport gasoline from terminals to underground storage tanks at retail stations where it is sold to consumers. A petroleum products terminal facility consists of one or more very large above-ground storage tanks for fossil fuel products, including gasoline, and is part of the distribution chain to supply fossil fuel products, including gasoline, from a refinery to end consumers, including consumers in Washington. Petroleum products terminal facilities typically also include loading racks where tanker trucks load fossil fuel products including gasoline for delivery to retail gasoline stations. Defendants created this distribution system because it was more efficient and cost effective for them to distribute gasoline from refineries to retail gasoline stations. As described below, Defendants substantially

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participated in this gasoline distribution process by producing raw crude oil, supplying raw crude oil to refineries, refining raw crude oil into finished gasoline at refineries, supplying gasoline into pipelines, removing gasoline from pipelines at certain storage facilities or placing gasoline into trucks for transport to retail sites, and/or storing gasoline in underground storage tanks at retail gasoline stations.

30. The value of each Defendant's company is principally determined by its fossil fuel reserves. Reserves are the lifeblood of the company—without them, an oil company's value declines precipitously. There is no way that decisions on companywide levels of fossil fuel production, which are inherently intertwined with decisions on the levels of reserves, could be made by Defendants' subsidiaries.

31. Each Defendant has controlled and continues to control all relevant decisions regarding fossil fuel production, fossil fuel reserves, fossil fuel promotion, and climate policy for their respective corporate families—indeed, these are some of the primary functions that Defendants have performed for their subsidiaries. This control is illustrated by the activities and statements by Defendants described herein. These include advertisements and statements by each Defendant promoting its company-wide production of fossil fuels, and by Defendants' public statements acknowledging their control of company-wide production levels, reserves, and climate policy. For example, Defendants—and not their subsidiaries—annually submit reports to CDP (formerly the Carbon Disclosure Project) addressing their group-wide climate change policies and actions.[11] Each Defendant, through its employees and/or agents, also controls the process by which its fossil fuels, including raw crude oil and natural gas, are produced, transported, refined, stored, distributed, marketed, and/or sold to consumers by and through its subsidiaries.

[11] *See, e.g.*, BP Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 1; Chevron Corporation Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 2; ConocoPhillips Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 2; Exxon Mobil Corporation Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 1; Royal Dutch Shell Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 2; *available at* https://www.cdp.net/en/companies.

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32. As a result of Defendants' control over all relevant decisions regarding fossil fuel production, fossil fuel reserves, fossil fuel promotion, and climate policy, Defendants are responsible for their subsidiaries' past and current production and promotion of fossil fuel products and future plans regarding production and promotion.

33. Defendants have at all relevant times controlled and acted through their subsidiaries as their agents concerning the conduct alleged in this complaint.

34. The BP parent company is the ultimate decision maker on the most fundamental business decision about the company's core business, *i.e.*, the level of companywide fossil fuels to produce, including taking into account climate change risks. This decision includes multi-decade future business planning regarding production levels. BP states in its most recent annual report that it brought "seven major projects in the Upstream [segment, *i.e.*, exploration and production] . . . online and under budget for the portfolio as a whole," and these projects, "along with six we brought online in 2016, have contributed to a 12% increase in our production."[12] It continued: "That helps to put us on track to deliver 900,000 barrels of new product per day by 2021."[13] "We also strengthened our portfolio with our most successful year of exploration since 2004, sanctioned three exciting new projects in Trinidad, India and the Gulf of Mexico and added 143% reserves replacement for the group."[14]

35. Notably, the BP parent—not a subsidiary—submits annual responses to climate change questionnaires from a non-profit organization called CDP (formerly the Carbon Disclosure Project), which runs the global disclosure system for investors, companies, and others to assist them in managing their environmental impacts.[15] In its 2016 response, BP publicly stated that its "Board or individual/sub-set of the Board or other committee appointed by the

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[12] BP Annual Report and Form 20-F 2017, *supra* note 5, at 9.

[13] *Id.*

[14] *Id.*

[15] BP Responses to Climate Change 2016 Information Request from Carbon Disclosure Project, *supra* note 4.

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Board" is the highest level within the company with direct responsibility for climate change.[16] Climate change is, of course, a major risk to BP's business because fossil fuels emit carbon dioxide and thus any significant climate change action may have an impact on BP's business. BP thus explains:

> As part of BP's annual planning process, we review the principal risks and uncertainties to the group. We identify those as having a high priority for particular oversight by the board and its various committees in the coming year. BP manages, monitors and reports on the principal risks and uncertainties that can impact our ability to deliver our strategy of meeting the world's energy needs responsibly while creating long-term shareholder value. Climate change and carbon pricing are explicitly assessed as risk factors. Our management systems, organizational structures, processes, standards, code of conduct and behaviours together form a system of internal control that governs how we conduct the business of BP and manage associated risks.[17]

36. BP further states: "Strategic climate-related policy and other relevant non-operational risk is assessed at a group level."[18] BP in its CDP response also takes responsibility for companywide production of fossil fuels by calculating the greenhouse gas emissions resulting from the use of its products by consumers based on "BP's total reported production of natural gas, natural gas liquids and refinery throughputs."[19]

37. BP's chief executive is responsible for maintaining "BP's system of internal control" that is "employed to conduct the business of BP," and BP's CDP response states: "Climate change risks are reviewed through two executive committees - chaired by the group chief executive, and one working group chaired by the executive vice president and group chief of staff, as part of BP's established management structure."[20] BP describes its "risk management

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[16] *Id.* at 1. BP's response to the Carbon Disclosure questionnaire was on behalf of all of its segments, including upstream operations. *Id.* at 26.

[17] *Id.* at 2.

[18] *Id.* at 3.

[19] *Id.* at 40.

[20] *Id.* at 2.

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procedures with regard to climate change risks and opportunities," as being "[i]ntegrated into multi-disciplinary companywide risk management processes."[21]

38. BP as the parent company also takes responsibility for the global corporate family on the issue of "stranded assets," *i.e.*, the possibility that fossil fuel reserves may become stranded assets if, prior to the end of their economic life, they no longer can earn an economic return because of climate change: "BP is well aware of the so-called stranded assets debate and is considering it carefully."[22]

39. BP does business in Washington, including through its subsidiaries and agents. BP subsidiaries—including BP America Inc., BP America Production Company, BP Amoco Chemical Company, BP Corporation of North America, Inc., BP Oil Pipeline Company, BP Pipelines (North America) Inc., BP Products North America Inc., BP West Coast Products LLC, IGI Resources, Inc., and Atlantic Richfield Company—are registered to do business in Washington and have an agent for service of process in Washington.

40. BP, through its subsidiary and agent BP West Coast Products LLC ("BPWCP"), operates the Cherry Point Refinery in Blaine, Washington, with a processing capacity of up to 236,000 barrels of crude oil per day. BP is seeking to increase production by 9,000 barrels per day. It is the third largest refinery on the West Coast.[23] Cherry Point provides a majority of the jet fuel used at international airports in Seattle, Portland, and Vancouver, British Columbia.[24] When it first opened in 1971, its primary purpose was to refine crude oil brought by tanker ships from the North Slope of Alaska; today it accepts and refines crude oil from around the world.[25] BP's Cherry Point refinery also accepts thousands of barrels per day of Bakken crude oil by

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[21] *Id.*

[22] *Id.* at 3.

[23] Energy Transitions Laboratory, Western Washington University, A Refining History of Washington State at 6 (Aug. 2015), http://www.energytrans.org/uploads/4/7/9/7/47971323/2015-08-20_jones_refineries.pdf ("Refining History").

[24] Washington BP's economic investment, https://www.bp.com/content/dam/bp-country/en_us/PDF/2017EIR/BP%20in%20Washington.pdf.

[25] *Id.*

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railcar, and has done so since in or around 2013. Over the past decade, BP reports that it has made more than $1.5 billion worth of capital improvements at the refinery.[26] BP reports that as of 2016, it spent $275 million with Washington vendors and provides jobs to more than 1,500 people.[27] It also states that it is "proud to provide a tax base that supports local school and fire districts" and has been "a good neighbor . . . for more than 45 years."[28] BP, including through its subsidiaries and agents BP Oil Shipping Company, USA, and BP Oil Supply Company, has chartered marine tankers to supply crude oil to the Cherry Point terminal. BP, including through the Alaska Tanker Company (a partnership between BP, Keystone Alaska, LLC, and OSG Ship Management, Inc.), transports Alaska North Slope crude oil from Alaska to Washington refineries.

41. BP's website describes Cherry Point as one of its "premier U.S. assets following the merger with ARCO in 2000."[29]

42. BP also operates in Alaska, where the company began working in 1959.[30] BP's Cherry Point refinery, which BP describes as its "refining workhorse," was built to process Alaskan crude oil.[31] BP started drilling at the massive Prudhoe Bay oil field in 1968, which has generated more than 12.5 billion barrels of oil since 1977.[32]

43. BP, through its subsidiary and agent BPWCP, operated the Ferndale Refinery from 1988, when its wholly owned subsidiary, Sohio Oil Company, acquired the refinery from Mobil Oil, until 1993.[33] BP continues to own and operate the Ferndale Refinery that has a

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[26] *Id.*

[27] *Id.*

[28] *Id.*

[29] BP, *Washington*, https://www.bp.com/en_us/bp-us/where-we-operate/bp-washington.html (last visited May 8, 2018).

[30] BP, *BP in Alaska*, https://www.bp.com/content/dam/bp-country/en_us/PDF/2016EIR/BP_in_AK_2016.pdf at 2.

[31] BP, *Washington*, *supra* note 29.

[32] BP, *BP in Alaska*, *supra* note 30, at 2.

[33] Wikipedia, *Ferndale Refinery*, https://en.wikipedia.org/wiki/Ferndale_Refinery (last updated Oct. 23, 2017); Associated Press, *Mobil Oil to Sell Ohio Refinery to Sohio*, N.Y. TIMES

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current capacity of 227,000 barrels of oil a day.[34] BP's Ferndale Refinery sources nearly 50% of its crude supply from BP's equity Alaska North Slope production. The Ferndale Refinery meets about 20% of regional gasoline demand.

44. BP, through its subsidiary and agent BP Pipelines (North America), owns and operates the Olympic Pipeline, a 400-mile interstate pipeline system that includes 12-inch, 14-inch, 16-inch, and 20-inch pipelines.[35] The pipeline runs along a 299-mile corridor from Blaine, Washington to Portland, Oregon and transports gasoline, diesel, and jet fuel.[36] The fuel transported by the Olympic Pipelines originates at four Puget Sound refineries, and is delivered to Seattle's Harbor Island, Seattle-Tacoma International Airport, Renton, Tacoma, Vancouver (Washington), and Portland (Oregon).[37]

45. In a June 3, 2013 press release posted on BP Global's website, Jeff Pitzer, BP's Northwest Fuels Value Chain President stated: "[W]e remain committed to supplying our customers in . . . the Pacific Northwest with the quality fuels they depend on."[38]

46. BP, through its subsidiary and agent BPWCP owns petroleum product terminals in Blaine (T-91-WA-4418) and Seattle (T-91-WA04425).[39] BP's terminal in Seattle on Harbor Island is located at the terminus of a major northwest fuel pipeline and includes loading racks for tanker trucks to load fossil fuel products for distribution. BP, including through BP Oil Company, now known as BP Exploration and Oil Inc., owns the Pier 11 petroleum facility in Seattle on Elliot Bay that is used for receipt and shipment of petroleum products, and includes tank storage for up to 617,800 barrels of products.

(Oct. 21, 1988), https://www.nytimes.com/1988/10/21/business/company-news-mobil-oil-to-sell-refinery-to-sohio.html.

[34] Refining History, *supra* note 23, at 4.

[35] https://www.bp.com/en_us/bp-us/what-we-do/bp-pipelines.html.

[36] *Id.*

[37] *Id.*

[38] https://www.bp.com/en/global/corporate/media/press-releases/bp-completes-sale-of-carson-refinery-and-southwest-u-s--retail-a.html.

[39] BP, *Washington*, *supra* note 29.

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47. BP subsidiary and agent BP Energy Company is currently licensed as a fuel supplier in Washington. A supplier license allows the purchase and storage of fuel within the bulk transfer-terminal system, and also allows for import and export of fuel. BP subsidiary and agent BP Products North America Inc. is currently licensed as a fuel supplier and aircraft fuel distributor in Washington. An aircraft fuel distributor license allows for the purchase of aircraft fuel for resale. BP subsidiary and agent BPWCP is currently licensed as a fuel supplier, and aircraft fuel distributor in Washington, and also has a fuel terminal license in Washington.

48. There are three BP Energy offices that market natural gas throughout Washington.[40]

49. IGI Resources, Inc., a subsidiary of BP plc since 2000, markets natural gas in the northwest region.[41] Through IGI Resources, BP purchases biomethane produced at the King County South Wastewater Treatment Plant and at the Cedar Hills Landfill gas scrubbing operation, which is owned and operated by a third-party on landfill land leased from King County. Through IGI Resources, BP receives credits (called "Renewable Identification Numbers", or RINs) to meet an EPA-specified Renewable Volume Obligation. The RINs are either held to meet BP's internal obligations or sold on the market: through IGI Resources, BP sells South Plant gas to fuel local natural gas vehicles, and it sells the Cedar Hills gas to the California natural gas vehicle market. In 2017, the South Wastewater Treatment Plant produced 2,424,890 therms of renewable natural gas—which is equivalent to (fossil) natural gas, but much lower carbon impact, which was sold to generate over $6.2 million of revenue. And the Cedar Hills operation produced 15,176,700 therms in 2017, generating approximately $7 million in revenue to King County.

[40] *Id.*

[41] Bloomberg, *Company Overview of IGI Resources* (Aug. 16, 2018), https://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=681935; *BP completes purchase of IGI Resources*, HOUSTON BUSINESS JOURNAL (Sept. 28, 2000), https://www.bizjournals.com/houston/stories/2000/09/25/daily24.html.

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50. BP defines itself as "a retail marketing leader with around 7,100 BP- and ARCO-branded sites in the U.S." ARCO-branded gas stations are ubiquitous throughout western and central Washington.[42] Its roughly 1,000 am/pm® convenience stores serve 24 million customers a month in five western states, including Washington.[43]

51. BP exercises control over gasoline product quality and specifications at these ARCO-branded retail stations. BP, including through its subsidiary and agent BPWCP, at one time owned ARCO-branded stations and the real properties on which they were located in Washington, including some gasoline stations at least through the mid-2000s. BP, including through its subsidiary and agent BPWCP, is engaged in the marketing and distribution of motor fuel in Washington, and sells ARCO-branded motor fuels to franchisees in Washington. When BP sold certain ARCO-branded stations, it required that the purchasers enter into franchise agreements mandating the exclusive sale of ARCO-branded gasoline and the operation of *ampm* minimarkets. BP prohibits the franchisee from selling non-ARCO-branded motor fuel at these gasoline station sites. BP delivered gasoline products into storage facilities at the franchisee stations, and had exclusive authority to set the price at which the franchisee would purchase gasoline from BP. BPWCP has the exclusive authority to terminate the franchise agreement if it determines to withdraw from the marketing of motor fuel through retail outlets in the relevant geographic market. When BP sold the properties, it included deed restrictions applicable during the terms of the franchise agreements that prohibited construction or operation of a convenience food store that is not subject to a franchise agreement (or other agreement) with BPWCP or a facility selling gasoline that is not subject to a franchise agreement (or other agreement) with BPWCP. BPWCP is the owner of several federally registered trademarks that are licensed to franchisees, including ARCO-branded gasoline trademarks. The ARCO trademarks have been widely and continuously used in commerce since 1978 in connection with ARCO's gasoline stations throughout the western United States including in Washington. The ARCO trademarks

[42] https://www.arco.com/find-a-station/washington/.

[43] https://www.bp.com/en_us/bp-us/what-we-do/retail.html.

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are used by consumers to identify the products available at ARCO-branded gasoline stations. BPWCP invested significant time and money to advertise and market the ARCO trademarks, in connection with the sale of high quality motor fuels and developed considerable good will in the ARCO trademarks among motor fuels consumers. BPWCP relies heavily on the brand recognition and good will that it has developed over the years in the ARCO trademarks to attract customers and to make sales of ARCO-branded motor fuels. Franchisee dealers pay a royalty to use BPWCP's trademarks. BPWCP's Vice President of *ampm* Business Development has stated: "Ensuring that the divested sites would continue to operate as franchises promoting the goodwill of the ARCO and *ampm* brands was and continues to be a vital aspect of BP's business operations in Western Washington." Some of these franchise agreements were for terms as long as 20 years.

52. BP previously owned and/or operated BP-branded gasoline stations in Washington. For example, BP-branded gasoline stations in Snohomish, King, Pierce and Thurston Counties had a total 1991 sales volume of twelve million (12,000,000) gallons. BP-branded retail stations can only sell gasoline that contains BP's proprietary additives—the additives that distinguish otherwise fungible gasoline as gasoline that can be sold at BP-branded retail stations. Upon information and belief, BP has entered into contracts with operators of BP-branded retail stations in Washington, and distributors, which, among other things, have required these operators to sell only gasoline with BP proprietary additives, and for supply of certain volumes of such gasoline to BP-branded stations. BP offers credit cards to consumers on its interactive website to promote sales of gasoline and other products at its branded gasoline stations, including BP-branded retail stations in the United States, and upon information and belief, formerly did so for BP-branded retail stations in Washington. BP promotes gasoline sales by offering consumers, through its interactive website, "cent-per-gallon rewards" for using BP credit cards that effectively discount gasoline sold at BP stations, including BP-branded retail stations in the United States, and upon information and belief, formerly did so for BP-branded retail stations in Washington.

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53. BP subsidiary and agent BPWCP has stated that pipelines including its own "serve a significant function in this region," referring to Washington, because these "pipelines supply the natural gas and refined petroleum products that are the lifeblood of the economy."

54. BP does business in the United States, including through its subsidiaries and agents. BP's website states: "BP's oil and gas exploration and production division is one of its core businesses, globally and in the United States."[44] BP's website further states: "Nearly three decades after BP began exploring the deepwater Gulf of Mexico, the company remains one of the region's leading oil and gas producers, with lease blocks covering an area more than twice the size of Delaware. In fact, BP has been the largest energy investor in the deepwater Gulf over the past decade."[45] BP's average daily oil production in the Gulf of Mexico region is now more than 300,000 barrels of oil equivalent per day. BP's website also describes its extensive production activities in Alaska: "BP has spent more than half a century exploring and developing Alaska's oil and gas resources, and its operations in and around the giant Prudhoe Bay field, located on the North Slope, account for around 55 percent of the state's oil and gas production."[46] BP further reports that "[s]ince Prudhoe Bay began production in 1977, it has generated more than 12.5 billion barrels of oil" and that "[f]our decades after starting up, Prudhoe Bay remains one of North America's largest oil fields."[47] BP's website states that "Prudhoe Bay is the most prolific oilfield in U.S. history."[48] BP further describes its oil and gas production in Alaska as follows: "BP has a significant business interest in Alaska's North Slope. The company operates the entire Greater Prudhoe Bay area, which consists of the Prudhoe Bay field and a number of smaller fields. This area produces around 55 percent of Alaska's oil and gas, and in 2016 it averaged nearly 281,000 barrels of oil equivalent each day. BP also owns

[44] https://www.bp.com/en_us/bp-us/what-we-do/exploration-and-production.html.

[45] *Id.*

[46] *Id.*

[47] *Id.*

[48] https://www.bp.com/en_us/bp-us/where-we-operate/bp-in-alaska.html.

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interests in seven other North Slope oil fields, including Alaska's newest oil and gas field, Point Thomson."[49] BP has 1,700 employees in Alaska, and as of 2016, had an operating budget of $600 million there.

55. BP holds a 32% working interest in the Point Thomson natural gas production system, which is estimated to hold 25% of known North Slope natural gas in Alaska. BP states the "development of Point Thomson included a multi-billion dollar investment to drill wells, and construct processing facilities, gravel pads, pipelines, and supporting infrastructure including an airstrip, base camp, and sea barge docks and piers."[50]

56. BP, through its subsidiaries and agents, also explores for and produces fossil fuels in Colorado, New Mexico, Oklahoma, and Wyoming. Notably, BP touts its "decades of experience in the San Juan Basin — located mainly in New Mexico and Colorado" and a new drilling technology there using multilateral wells that allows producers to "access more of the oil and gas in a given reservoir."[51]

57. In a June 3, 2013 press release posted on BP Global's website, BP stated: "Over the past five years, BP has invested more than $55 billion in the US – more than any other energy company." BP's press release further stated that "BP is the nation's second-largest producer of oil and gas" and "[d]irectly employ[s] more than 20,000 people in all 50 states."[52] BP Lower 48 CEO Dave Lawler has described BP's United States production operations in the lower 48 states as the "premier U.S. onshore oil and gas business."[53]

58. BP, through its subsidiary and agent BP Pipelines (Alaska) Inc. is a 48.44% owner in the 800-mile long Trans Alaska Pipeline System (TAPS), one of the largest pipeline systems in the world. The TAPS average daily throughput in 2015 was 508,446 barrels of crude

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[49] *Id.*

[50] https://www.bp.com/content/dam/bp-country/en_us/PDF/2016EIR/BP_in_AK_2016.pdf.

[51] https://www.bp.com/en_us/bp-us/what-we-do/exploration-and-production/lower-48.html.

[52] https://www.bp.com/en/global/corporate/media/press-releases/bp-completes-sale-of-carson-refinery-and-southwest-u-s--retail-a.html.

[53] https://www.bp.com/en_us/bp-us/what-we-do/exploration-and-production/lower-48.html.

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oil per day, and its total throughput for 2015 was over 185 million barrels of crude oil. Since start-up, TAPS has transported more than 17.2 billion barrels of crude oil.

59. BP, including through its subsidiaries acting as its agents, owns and operates two gasoline refineries in the United States in addition to Cherry Point refinery in Blaine, Washington – the Whiting refinery near Chicago, Illinois; and the Toledo refinery in Oregon, Ohio, in which it has a 50% interest. BP has owned the Whiting refinery since 1889 and as of 2017 it processed 430,000 barrels per day of crude oil to produce gasoline and other fossil fuels products. BP describes the Whiting Refinery as a "sprawling, 1,400- acre complex" near downtown Chicago that "can produce enough gasoline each day to fuel 6 million cars."[54] BP further describes the Whiting refinery as the "largest refinery in the Midwest — as well as BP's largest refinery in the world."[55] The Toledo refinery began operations in 1919 and as of 2017 it processed 160,000 barrels of crude oil per day into finished fossil fuel products, including gasoline. BP touts that the refinery "produces enough gasoline each day for an average car to drive back and forth from Toledo to Miami more than 30,000 times."[56] BP, including through its subsidiaries Atlantic Richfield Company and BP West Coast Products acting as its agents, owned and operated the Carson refinery near Los Angeles from approximately 1966 through 2013 with a refining capacity of approximately 266,000 barrels of crude oil per day. BP described the Carson refinery as "one of the largest on the US West Coast."[57] The refinery is located on 650 acres in Los Angeles County, near the Long Beach and Los Angeles Harbors.

60. BP, through its subsidiaries and agents, owns numerous fossil fuel product pipelines in the United States. The Olympic Pipeline is a 400-mile interstate pipeline system that transports gasoline, diesel, and jet fuel. BP, through its subsidiary and agent BP Pipelines (North America), owns and operates the 203-mile long Chicap Pipeline System in Illinois which

[54] https://www.bp.com/en_us/bp-us/what-we-do/refining/whiting.html.

[55] *Id.*

[56] https://www.bp.com/en_us/bp-us/what-we-do/refining/toledo.html.

[57] https://www.bp.com/en/global/corporate/media/press-releases/bp-completes-sale-of-carson-refinery-and-southwest-u-s--retail-a.html.

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transports crude oil. BP also has interests in the following joint-venture pipelines in the United States that transport crude oil: the Caesar Pipeline, Capline Pipeline, Endymion Oil Pipeline, Mars Oil Pipeline, Proteus Oil Pipeline, and Ursa Pipeline.

61. There are 7,200 BP-branded retail gasoline stations in the United States. Upon information and belief, BP has entered into contracts with operators of BP-branded retail stations in the United States, and/or distributors, that, among other things, have required these operators to sell only BP-branded gasoline, and for supply of certain volumes of BP-branded gasoline to BP-branded stations. In 2017, BP announced that it was reintroducing its Amoco retail fuel brand, and publicly touted its "commitment to helping our branded marketers grow their businesses," and Rick Altizer, senior vice president of sales and marketing for BP Fuels North America, stated "BP has a very strong brand presence in the U.S."[58] BP announced that the Amoco-branded stations "will offer all of the same consumer loyalty programs as BP-branded retail sites, including BP Driver Rewards" and "also will sell all grades of gasoline with BP's proprietary additive."[59] This was all in line with BP's "global fuels marketing strategy."[60]

62. BP p.l.c. is the registered owner of the BP trademark which has been registered with the United States Patent and Trademark Office since 2008. According to the registration, the BP trademark is used in connection with motor vehicle fuels, including gasoline and diesel fuel, and for retail gasoline stations.

63. The Chevron parent company is the ultimate decision maker on the most fundamental business decision about the company's core business, *i.e.*, the level of companywide fossil fuels to produce, including taking into account climate change risks. This decision includes multi-decade future business planning regarding production levels.

[58] https://www.bp.com/en_us/bp-us/media-room/press-releases/bp-brings-back-amoco-brand-for-us-fuel-network.html.

[59] *Id.*

[60] *Id.*

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64. Notably, the Chevron parent—not a subsidiary—submits annual responses to climate change questionnaires from CDP.[61] In its 2016 response, Chevron stated that the highest level of direct responsibility for climate change within its company is the "Board or individual/sub-set of the Board or other committee appointed by the Board."[62] Chevron reports that its risk management procedures with regard to climate change risks and opportunities are "[i]ntegrated into multi-disciplinary company wide risk management processes."[63] Chevron states: "Climate risks and issues are expressly discussed and addressed monthly at a standing executive level committee [of the Board], and at least twice annually – more often as warranted – with the Corporate Strategy and Planning Committee."[64] The Board considers "[a]ll geographic areas, domestic (USA) and foreign in which Chevron's operation and performance are affected or could be affected."[65] Chevron's response further states: "We assess the GHG emissions of our capital projects. When developing and approving major capital projects, we estimate a project's incremental emissions profile, assess the final financial impact of GHG regulations, and describe the emissions reduction options considered and implemented."[66]

65. Chevron does business in Washington, including through its subsidiaries and agents. Chevron subsidiaries—including Chevron Pipe Line Company, Chevron Oronite Company LLC, Chevron Phillips Chemical Company LP, Chevron Natural Gas Services, Inc., Chevron U.S.A. Inc., and Texaco Group LLC—are registered to do business in Washington and have an agent for service of process in Washington.

66. Chevron, through its subsidiary and agent Chevron Pipe Line Company, operates pipeline assets that transport crude oil, refined petroleum products, liquefied petroleum gas,

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[61] Chevron Responses to Climate Change 2016 Information Request from Carbon Disclosure Project, *supra* note 6.

[62] *Id.* at 2.

[63] *Id.*

[64] *Id.* at 3.

[65] *Id.* at 2-3.

[66] *Id.* at 3.

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natural gas and chemicals within the United States. On a daily basis, Chevron Pipe Line's network of approximately 4,100 miles of pipe transports over 1.3 million barrels of crude, refined products and chemicals.[67]

67. Chevron subsidiary and agent Chevron Pipe Line Company has stated that pipelines including its own "serve a significant function in this region," referring to Washington, because these "pipelines supply the natural gas and refined petroleum products that are the lifeblood of the economy." Chevron, including through its agent Union Oil Company of California, partially owned from approximately 1954 through at least 2002 the Yellowstone Pipeline that transports fossil fuel products, including gasoline, into Washington and other locations. Chevron owned the Northwest Pipeline, which supplied fossil fuel products from Salt Lake City, Utah, into eastern Washington, through approximately June 2013.

68. Chevron, including through its subsidiaries and agents, owns and operates a refinery in Salt Lake City, Utah. The Salt Lake City refinery supplies petroleum products, including gasoline, to eastern Washington. The refinery began operations in 1948 and processes up to 50,000 barrels of crude oil per day into fossil fuel products, including gasoline.

69. Eastern Washington markets receive petroleum product via the Chevron pipeline from Utah.[68] The Chevron pipeline distributes petroleum products to locations including a 33-acre bulk terminal facility in Pasco, Washington that has 21 above-ground storage tanks. The site has operated as a bulk fuel terminal since 1950. The Pasco Terminal is responsible for 200 miles of six-inch and eight-inch pipelines which transports gasoline, diesel, and jet fuel, including in Washington.

[67] http://www.chevronpipeline.com/about/.

[68] Refining History, *supra* note 23, at 20; *see also* http://agportal-s3bucket.s3.amazonaws.com/uploadedfiles/Another/Safeguarding_Consumers/Antitrust/Unfair_Trade_Practices/Gas_Prices/2018/2018_MARCH_Illustration-002.pdf.

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70. Before it merged with Chevron, Texaco co-owned the Anacortes Refinery with Shell; the refinery has a capacity of over 145,000 barrels a day.[69] Texaco divested its share in early 2000, and Shell became the sole owner of the facility.

71. Chevron, through its subsidiaries and agents, also produces oil in Alaska, and upon information and belief, some of this crude oil is supplied to Washington.

72. Chevron entered into contracts to purchase hundreds of thousands of barrels of fossil fuel products, including gasoline, diesel, and jet fuel, from the Anacortes refinery prior to Texaco's merger with Chevron.

73. Chevron subsidiary and agent Chevron Marine Products LLC is currently licensed as a fuel supplier in Washington. A supplier license allows the purchase and storage of fuel within the bulk transfer-terminal system, and also allows for import and export of fuel. Chevron subsidiary and agent Chevron U.S.A. Inc. is currently licensed as a fuel supplier and aircraft fuel distributor in Washington. An aircraft fuel distributor license allows for the purchase of aircraft fuel for resale.

74. There are Chevron-branded and Texaco-branded gasoline stations in Washington.[70] Chevron exercises control over gasoline product quality and specifications at Chevron-branded and Texaco-branded retail stations. Chevron-branded retail stations display the trademark of Chevron and can only sell gasoline that contains Chevron's proprietary additives—the additives that distinguish otherwise fungible gasoline as gasoline that can be sold at Chevron-branded retail stations. Texaco-branded retail stations display the trademark of Texaco and can only sell gasoline that contains Texaco's proprietary additives—the additives that distinguish otherwise fungible gasoline as gasoline that can be sold at Texaco-branded retail stations. Chevron offers credit cards to consumers on its interactive website to promote sales of gasoline and other products at its branded gasoline stations, including Chevron-branded stations in Washington. Chevron promotes gasoline sales by offering consumers, through its interactive

[69] Refining History, *supra* note 23, at 7, 27.

[70] https://www.chevronwithtechron.com/station/.

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website, cents-per-gallon fuel credits for each purchase of Chevron gasoline, including at Chevron-branded stations in Washington.[71] Chevron's website states that "Chevron's award-winning ExtraMile® convenience stores operate at more than 750 company-owned and franchised sites in California, Oregon and Washington" and that "Our products are sold in the nearly 8,000 Chevron® and Texaco® retail stations in the United States."[72] Chevron has entered into contracts with owners and/or operators of Chevron-branded retail gasoline stations in Washington that, among other things, have required these owners and/or operators to sell only Chevron-branded gasoline, and that require supply of certain volumes of Chevron-branded gasoline to Chevron-branded stations. For example, upon information and belief, a Chevron contract with a retail gasoline station operator in Washington stated: "By conveying a coherent and instantly recognizable image, Chevron branded retail outlets boost brand recognition and increase the value of the brand for the benefit of Chevron and its marketers and retailers alike. Accordingly, Retailer shall at all times during the term of this Contract cause the Premises to comply with Chevron current and future image standards for branded retail outlets, as set forth in Chevron *Hallmark 21 Retail Image Guidelines*. . ."

75. Chevron, including through its subsidiary and agent Chevron U.S.A. Inc. owned and/or operated a fleet of tanker trucks to deliver gasoline to retail gasoline stations in Washington.

76. Chevron from approximately 1950 through 2005 owned Point Wells, a 97–acre parcel of land used for an asphalt refining plant and petroleum product storage, that included approximately 18 large fossil fuel product storage tanks, a warehouse, a lube filling shed, an asphalt shed, and an extensive wharf.[73] Point Wells is located on Puget Sound between Seattle

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[71] https://www.chevron.com/operations/products-services/gift-credit-cards.

[72] https://www.chevron.com/worldwide/united-states.

[73] *E.g.*, http://pointwells.com/history/; https://snohomishcountywa.gov/DocumentCenter/View/51931/C-29-Point-Wells-Remediation-Memo-received-April-27-2018; Polly Lane, *Chevron Selling Asphalt Refineries -- Operations Being Cut In Restructuring Plan*, THE SEATTLE TIMES (Oct. 12, 1993), http://community.seattletimes.nwsource.com/archive/?date=19931012&slug=1725665.

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and Everett. The refinery produced approximately 5,500 barrels a day.[74] The Point Wells facility included a distribution center for gasoline, diesel oil, and aviation fuel that was served by truck and rail terminals. As of the early 1990s, Chevron's overall asphalt business was one of the largest in the United States. In late 1990, the Point Wells terminal was the site of a 4,000-gallon oil spill that damaged beaches on both sides of Puget Sound.[75]

77. The ConocoPhillips parent company is the ultimate decision maker on the most fundamental business decision about the company's core business, *i.e.*, the level of companywide fossil fuels to produce, including taking into account climate change risks. This decision includes multi-decade future business planning regarding production levels. ConocoPhillips's most recent annual report repeatedly demonstrates that as the parent, ConocoPhillips decides companywide the level of fossil fuels to produce, including taking into account climate change risks: "ConocoPhillips is the world's largest independent exploration and production (E&P) company, based on proved reserves and production of liquids and natural gas."[76] "We explore for, produce, transport and market crude oil, bitumen, natural gas LNG and natural gas liquids on a worldwide basis."[77] The level of oil and gas reserves principally determines the value of the entire company: "Unless we successfully add to our existing proved reserves, our future crude oil, bitumen, natural gas and natural gas liquids production will decline, resulting in an adverse impact to our business."[78] "[F]uture environmental laws and regulations, such as limitations on greenhouse gas emissions, may impact or limit our current business plans and reduce demand for our products."[79]

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[74] Lane, *supra* note 73.

[75] *Id.*

[76] ConocoPhillips, 2017 Form 10-K at 1 (Feb. 20, 2018), available at https://www.sec.gov/Archives/edgar/data/1163165/000119312518049729/d534096d10k.htm.

[77] *Id.* at 2.

[78] *Id.* at 21.

[79] *Id.* at 22.

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78. ConocoPhillips, not its subsidiaries, optimizes its oil and gas portfolio to fit its strategic plan. For example, it reports that "[i]n November 2016, we announced our plan to generate $5 billion to $8 billion of proceeds over two years by optimizing our portfolio to focus on value-preserving, low cost-of-supply projects that strategically fit our development plans."[80] ConocoPhillips further states that it "accomplished several strategic milestones in 2017, including progressing our efforts to optimize our portfolio."[81] Only the parent company can "optimize" a companywide "portfolio," and managing its overall portfolio undeniably takes into account "limitations on greenhouse gas emissions" as well as the company's climate change position.

79. Notably, the ConocoPhillips parent—not a subsidiary—submits annual responses to climate change questionnaires from CDP.[82] ConocoPhillips's 2016 response to the CDP acknowledges that its "Board or individual/sub-set of the Board or other committee appointed by the Board" has the highest level of direct responsibility for climate change within the company,[83] that ConocoPhillips develops a corporate Climate Change Action Plan which "identifies company-wide risks and opportunities and adopts a consistent approach to manage the risk across the company,"[84] and that it "routinely test[s] [its] investment decisions and business strategies against a low carbon scenario in [its] strategic scenario planning process."[85] ConocoPhillips factors the "cost of carbon into [its] long range planning exercise, and [its] long range planning process considers the long-term changes to supply and demand of [its] primary products, oil and gas."[86] And its climate change strategy "cause[s] major business decisions to

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[80] *Id.* at 1.

[81] *Id.* at 31.

[82] ConocoPhillips Responses to Climate Change 2016 Information Request from Carbon Disclosure Project, *supra* note 7.

[83] *Id.* at 2.

[84] *Id.* at 3.

[85] *Id.*

[86] *Id.* at 28.

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be made with consideration of the risks and impacts of climate change."[87] ConocoPhillips in its CDP response also takes responsibility for companywide production of fossil fuels by calculating the greenhouse gas emissions resulting from the use of its products by consumers based on "equity production rates publicly reported in company financial statements" and other data.[88]

80. ConocoPhillips does business in Washington, including through its subsidiaries and agents. ConocoPhillips subsidiaries—including ConocoPhillips Company, ConocoPhillips Alaska, Inc., and ConocoPhillips Communications, Inc.—are registered to do business in Washington and have an agent for service of process in Washington.

81. ConocoPhillips operated the Ferndale Refinery, with a capacity of 101,000 barrels of oil a day, until 2012,[89] when it spun off its downstream assets as a new independent energy company, Phillips 66, which still operates the Ferndale Refinery.[90]

82. ConocoPhillips is Alaska's largest oil producer and ships Alaskan crude oil to Washington.[91] "ConocoPhillips owns and operates Polar Tankers, one of the largest oil tanker fleets under U.S. flag. The fleet transports Alaska North Slope crude oil primarily to refineries in Puget Sound, San Francisco, Long Beach and Hawaii."[92] ConocoPhillips's fleet consists of five tankers "designed specifically for the twice-monthly 2,500 to 5,000-mile round trip from Valdez, Alaska, to Washington, California and Hawaii."[93] ConocoPhillips supplies the Phillips 66 Ferndale Refinery with Alaska North Slope crude oil in which ConocoPhillips has an equity interest. In 2006, ConocoPhillips paid a $540,000 fine to the Washington Department of Ecology for an oil spill of over 1,000 gallons in 2004 linked to its tanker, the Polar Texas, and that impacted 21 miles of Puget Sound beaches.

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[87] *Id.*

[88] *Id.* at 39.

[89] Refining History, *supra* note 23, at 4.

[90] *Id.* at 30.

[91] http://alaska.conocophillips.com/what-we-do/oil-production/Pages/default.aspx.

[92] ConocoPhillips, Alaska Operations 2016 Snapshot, available at https://static.conocophillips.com/files/resources/alaska-operations-snapshot-2016_final.pdf.

[93] *Id.*

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83. ConocoPhillips subsidiary and agent ConocoPhillips Pipe Line Company has stated that pipelines including its own "serve a significant function in this region," referring to Washington, because these "pipelines supply the natural gas and refined petroleum products that are the lifeblood of the economy." ConocoPhillips, including through its predecessor and agent Conoco, has partially owned since at least 1995 the Yellowstone Pipeline that transports fossil fuel products, including gasoline, into Washington and other locations.

84. ConocoPhillips has owned and/or operated gasoline terminals in Washington through its subsidiaries and agents, including the Moses Lake terminal (Conoco Pipeline Co.), the Tosco Northwest Renton terminal at 2423 Lind Avenue Southwest, Renton (Tosco), the Spokane terminal at 6317 East Sharp Avenue, Spokane (Conoco Pipeline Co.), the Tosco Northwest Spokane terminal at 3225 East Lincoln Road, Spokane (Tosco), the Tosco Northwest Tacoma terminal at 520 East D Street, Tacoma (Tosco), the Tosco Tacoma terminal at 516 East D Street, Tacoma (Tosco), and the Tosco Northwest Co.-Ferndale terminal at 3901 Unick Road, Ferndale (Tosco). The Renton terminal included seven above-ground product storage tanks that stored fossil fuel products including gasoline and diesel fuel.

85. ConocoPhillips, including through its subsidiary and agent ConocoPhillips Company, produces oil in the Bakken formation in North Dakota. Bakken crude oil is supplied to refineries in Washington. In 2016, 22% of the crude oil supply for refineries in Washington was from North Dakota Bakken crude oil shipped in by rail. Washington is the second most popular destination for Bakken crude oil supplied by rail from North Dakota, with supply averaging 126,000 barrels per day in 2016.

86. ConocoPhillips, through its predecessor and agent Tosco Corporation, previously owned and/or operated at least 14 Tosco-branded gasoline stations in Washington through at least 1997. ConocoPhillips, through its predecessor and agent Phillips 66, previously owned and/or operated Phillips 66-branded gasoline stations in Washington. ConocoPhillips exercised control over gasoline product quality and specifications at Tosco-branded, Phillips 66-branded, and 76-branded retail stations. Tosco-branded retail stations displayed the trademark of Tosco and could only sell gasoline that contained Tosco's proprietary additives—the additives that

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distinguished otherwise fungible gasoline as gasoline that could be sold at Tosco-branded retail stations. Phillips 66-branded retail stations displayed the trademark of Phillips 66 and could only sell gasoline that contained Phillips 66's proprietary additives—the additives that distinguished otherwise fungible gasoline as gasoline that could be sold at Phillips 66-branded retail stations. 76-branded retail stations displayed the trademark of the 76 brand and could only sell gasoline that contained the 76 brand's proprietary additives—the additives that distinguished otherwise fungible gasoline as gasoline that could be sold at 76-branded retail stations. In 2010, ConocoPhillips sought to enhance the image of its 76-branded gasoline stations and increase gallons of gasoline sold at its 76-branded gasoline stations by presenting West Coast retail station operators, including in Washington, with a partially financed modular redesign program to convert their sites to convenience stores. Wayne Warmack, ConocoPhillips' director of strategy implementation West Coast publicly stated at the time that "it was necessary to reconfigure sites to optimize the potential of our locations." He further stated: "The [West Coast Redevelopment Assistance Program] strategy is based on improving the profitability and viability of the site. This program should help enhance the perception of 76 as a top-tier, top-quality brand on the West Coast."[94] ConocoPhillips typically contributed 25-33% of construction costs based upon the projected gasoline volume uplift, the cost to supply each site, and forecasted margins in each market. ConocoPhillips also launched a new advertising program in 2009—"On the Driver's Side"—in the Pacific Northwest to promote fossil fuel product sales. Studies supporting the advertising program indicated it could lead to additional sales of 200 million more gallons of gasoline at West Coast 76 stations.

87. The Exxon parent company is the ultimate decision maker on the most fundamental business decision about the company's core business, *i.e.*, the level of companywide fossil fuels to produce, including taking into account climate change risks. This decision includes multi-decade future business planning regarding production levels. For example, its

[94] Barbara Grondin Francella, *ConocoPhillips Aims To Convert Dealter Stations To C-stores*, CONVENIENCESTORE NEWS (July 26, 2010), https://csnews.com/conocophillips-aims-convert-dealer-stations-c-stores.

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2018 Energy and Carbon Summary Report acknowledges that "the main driver of intrinsic value of an integrated oil company's upstream operations is its proved reserves" and its "proved reserves totaled about 20 billion oil-equivalent barrels" at the end of 2016, evidencing that production decisions are critical decisions made by the parent not the subsidiaries.[95] As Exxon states in its most recent 10-K, "ExxonMobil's success, including our ability to mitigate risk and provide attractive returns to shareholders, depends on our ability to successfully manage our overall portfolio, including diversification among types and locations of our projects."[96]

88. Notably, the Exxon parent—not a subsidiary—submits annual responses to climate change questionnaires from CDP.[97] In 2016, Exxon reported that the "Board or individual/sub-set of the Board or other committee appointed by the Board" is the highest level of direct responsibility for climate change within its company, that "the Chairman of the Board and Chief Executive Officer, the President and the other members of the Management Committee are actively engaged in discussions relating to greenhouse gas emissions and the risks of climate change on an ongoing basis," and that Exxon "require[s] all of [its] business lines to include, where appropriate, an estimate of greenhouse gas-related emissions costs in their economics when seeking funding for capital investments."[98]

89. Exxon Mobil Corporation is registered to do business in Washington and has an agent for service of process in Washington. Exxon does business in Washington, including through its subsidiaries and agents. Exxon subsidiaries—including ExxonMobil Oil Corporation, ExxonMobil Pipeline Company, and ExxonMobil Western Sales and Supply Company—are also registered to do business in Washington and have an agent for service of process in Washington.

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[95] http://cdn.exxonmobil.com/~/media/global/files/energy-and-environment/2018-energy-and-carbon-summary.pdf at 10.

[96] Exxon, 2017 Form 10-K at 3–4 (Feb. 28, 2018), available at https://www.sec.gov/Archives/edgar/data/34088/000003408818000015/xom10k2017.htm.

[97] Exxon Responses to Climate Change 2016 Information Request from Carbon Disclosure Project, *supra* note 8.

[98] *Id.* at 1-3.

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90. Defendant Exxon is responsible for the pre-merger conduct of Mobil Corporation with respect to all relevant issues herein, and the contacts of Mobil are attributable to Exxon.

91. Exxon, through its subsidiaries and agents, produces oil in Alaska. Exxon markets approximately 110,000 barrels per day of Alaskan North Slope crude oil, primarily to customers on the west coast of the United States. Exxon, including through its subsidiary and agent Sea River Company, transports Alaska North Slope crude oil from Alaska to Washington refineries.

92. Exxon, through its subsidiaries, produces oil in the Bakken formation in North Dakota. Bakken crude oil is supplied to refineries in Washington. In 2016, 22% of the crude oil supply for refineries in Washington was from North Dakota Bakken crude oil shipped in by rail. Washington is the second most popular destination for Bakken crude oil supplied by rail from North Dakota, with supply averaging 126,000 barrels per day in 2016.

93. Exxon predecessor and agent General Petroleum Corp. (a subsidiary of Socony (Standard Oil Company of New York), which was integrated into Mobil Chemical Co. when the company formed in 1960) built Ferndale Refinery in 1954 and continued to operate it until its acquisition by BP in 1988.[99] Mobil Chemical Co. was a division of Exxon predecessor and agent Mobil Oil Corporation. The refinery has a capacity of 101,000 barrels of oil a day.

94. Exxon, including through its subsidiaries and agents, owns and operates the Billings gasoline refinery in Montana, which supplies fossil fuel products, including gasoline, to Washington. The Billings refinery started operations in 1949, processes approximately 60,000 barrels of crude oil per day, and produces approximately 600 million gallons of gasoline and diesel fuel annually.

95. ExxonMobil Corporation owns a petroleum products terminal (T-91-WA-4411) in Spokane.[100] Exxon has owned and operated the terminal since 1954. Exxon, including through its subsidiary and agent Exxon Pipeline Company, has partially owned since at least 1995 the

[99] Refining History, *supra* note 23, at 7, 22; Wikipedia, *supra* note 33.

[100] IRS Approval Terminals (as of Apr. 30, 2018), https://www.irs.gov/pub/irs-utl/tcn_db.pdf.

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Yellowstone Pipeline that transports fossil fuel products, including gasoline, into Washington and other locations. Exxon's Spokane terminal has included seven storage tanks which are connected to the Yellowstone Pipeline and petroleum products are received via the pipeline and stored for delivery to customers.

96. Exxon, including through its subsidiary and agent Exxon Mobil Oil Corporation, owns the Pier 15 petroleum facility in Seattle on Elliot Bay that is used for receipt and shipment of petroleum products, and includes tank storage for up to 550,000 barrels of products.

97. Exxon subsidiary and agent ExxonMobil Oil Corporation is currently licensed as a fuel supplier in Washington, and also has a fuel terminal license in Washington. A supplier license allows the purchase and storage of fuel within the bulk transfer-terminal system, and also allows for import and export of fuel. Exxon subsidiary and agent ExxonMobil Western Sales & Supply is currently licensed as a fuel distributor in Washington. A fuel distributor license allows for the purchase of fuel from a licensed supplier for immediate export to a destination outside the state and also allows the import of fuel into the state by rail car or tanker truck.

98. There are numerous Exxon-branded gasoline stations in Washington, including in King County. Exxon, including through its predecessor Exxon Corporation, and its subsidiary and agent Exxon Mobil Oil Corporation, previously owned and operated Exxon-branded gasoline stations in Washington. Exxon exercises control over gasoline product quality and specifications at Exxon-branded retail stations. Exxon-branded retail stations display the trademark of Exxon and can only sell gasoline that contains Exxon's proprietary additives—the additives that distinguish otherwise fungible gasoline as gasoline that can be sold at Exxon-branded retail stations. Exxon offers credit cards to consumers, through its interactive website, to promote sales of gasoline and other products at its branded gasoline stations, including Exxon-branded retail stations in Washington. Exxon promotes gasolines sales by offering consumers discounts off every gallon of gasoline at Exxon™ or Mobil™ stations, including Exxon-branded retail stations in Washington.

99. For fifty years, from approximately 1958 through 2008, Exxon supplied aviation fuel to customers at the Moses Lake Grant County International Airport.

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100. Shell is involved in all facets of the petroleum production and distribution process by design, as "part of an integrated value chain, including trading activities, that turns crude oil and other feedstocks into a range of products which are moved and marketed around the world for domestic, industrial and transport use."[101]

101. The Shell parent company is the ultimate decision maker on the most fundamental business decision about the company's core business, *i.e.*, the level of companywide fossil fuels to produce, including taking into account climate change risks. This decision includes multi-decade future business planning regarding production levels. In its most recent annual report, Shell states: "Oil and gas remain central to our business for many years."[102] The annual report makes clear that Shell's overall production levels is a parent function: "Our delivery of new projects continues and we remain on track to deliver 1 million barrels of oil equivalent a day (boe/d) from new projects between 2014 and 2018. Overall, our production averaged 3.7 million boe/d in 2017, in line with 2016, with production from new fields offsetting the impact of field declines and divestments."[103]

102. Shell's control over production decisions became unmistakably clear in a preliminary injunction hearing in 2015 in a case brought by two of Shell's U.S. subsidiaries against Greenpeace in federal district court in Alaska. The Shell subsidiaries sought to restrain Greenpeace from protesting in close proximity to drilling ships exploring for oil off the coast of Alaska. Under cross examination, a subsidiary employee admitted that the decision to drill for oil was made by Royal Dutch Shell's Board of Directors in The Hague:

A: It's made at the board level, yes. . .

Q: The board of Royal Dutch Shell?

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[101] Shell, Annual Report and Form 20-F 2017 at 46 (Mar. 14, 2018), available at https://reports.shell.com/annual-report/2017/servicepages/downloads/files/shell_annual_report_2017.pdf.

[102] *Id.* at 06.

[103] *Id.* at 07.

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A: Yes.[104]

This should not be surprising given that such decisions involve billions of dollars ($7 billion in that case).[105]

103. In addition, the level of oil and gas reserves principally determines the value of the entire company: "In the longer term, replacement of proved oil and gas reserves will affect our ability to maintain or increase production levels, which in turn will affect our earnings and cash flows."[106] Shell's annual report lists over a thousand separate subsidiaries; it would be absurd to suggest that it is all of these subsidiaries—and not the Shell parent—that make individual decisions that determine the level of companywide fossil fuels to produce.[107]

104. Notably, the Shell parent—not a subsidiary—submits annual responses to climate change questionnaires from CDP.[108] In its 2016 response, Shell publicly stated that its "Board or individual/sub-set of the Board or other committee appointed by the Board" has the highest level of direct responsibility for climate change within the company.[109] Climate change is, of course, a major risk to Shell's business because fossil fuels emit carbon dioxide when used as intended and thus any significant climate change action may have an impact on Shell's business. Shell states that "overall accountability for climate change within Shell lies with the Chief Executive Officer (CEO) and the Executive Committee (EC - CEO, CFO and main business and functional Directors)."[110] In addition, "Group CO2, a corporate team with global remit is responsible for evaluating climate change related risks to the Shell group, supports the business in developing CO2 management strategies and has oversight of the company's CO2 management

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[104] *See* Tr. of Hr'g on Mot. Prelim. Inj. at 175:17-177:25, *Shell Offshore, Inc. v. Greenpeace, Inc.*, No. 3:15-cv-054-SLG (D. Alaska Apr. 30, 2015) (ECF No. 90).

[105] *Id.*

[106] Shell Annual Report, *supra* note 101, at 55.

[107] *Id.* at E2-E20.

[108] Shell Responses to Climate Change 2016 Information Request from Carbon Disclosure Project, *supra* note 10.

[109] *Id.* at 2.

[110] *Id.*

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implementation programme."[111] "Shell's strategy is actively driven by Group CO2, a corporate function that monitors and examines the strategic implications of climate change to Shell's business and the impact of developments in governmental policy and regulation with a direct line of accountability to the CEO and oversight of the company's GHG management programme."[112]

105. Shell states in its response: "Shell has a global approach to climate change risk management, covering all regions worldwide where we operate or explore."[113] Shell's global approach to climate change applies to existing and new projects: "The risks and opportunities of climate change are assessed for new assets or projects in development by considering a project screening value of GHG emissions at $40/tonne in all investment decisions. New and existing assets are required to have a GHG & Energy Management Plan (details improvement options considering the GHG Project Screening Value, emissions and/or energy intensity target(s))."[114]

106. Shell as the parent company also takes companywide responsibility for the issue of "stranded assets," *i.e.*, the possibility that fossil fuel reserves may become stranded assets if, prior to the end of their economic life, they no longer can earn an economic return because of climate change. Shell's position on this issue is straightforward (as reported by Reuters): "Royal Dutch Shell has dismissed the possibility that its proven oil or gas reserves will become unusable as a result of climate change regulation, saying fossil fuels will play a key role in global energy to 2050 and beyond."[115] In 2016, Royal Dutch Shell's CEO, Ben van Beurden, reportedly stated that the "company is valued on produceable reserves that we can produce in the next 12 or 13 years," and "We should certainly be able to produce those under any climate outcome. Even if

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[111] *Id.*

[112] *Id.* at 3.

[113] *Id.* at 2.

[114] *Id.* at 3.

[115] Reuters, "Shell says fossil fuel reserves won't be 'stranded' by climate regulation" (May 19, 2014), https://www.reuters.com/article/shell-climatechange/shell-says-fossil-fuel-reserves-wont-be-stranded-by-climate-regulation-idUSL6N0O54CB20140519.

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global temperatures can only rise by two degrees."[116] With respect to climate change risks, Shell's CEO states: "We know our long-term success as a company depends on our ability to anticipate the types of energy that people will need in the future in a way that is both commercially competitive and environmentally sound."[117]

107. Shell does business in Washington, including through its subsidiaries and agents. Shell subsidiaries—including Shell Oil Company, Shell Oil Company, LLC, Shell Oil Products Company LLC, Shell Marine Products (US) Company, Shell Trading (US) Company, Shell Energy North America (US), L.P., and Equilon Enterprises LLC—are registered to do business in Washington and have an agent for service of process in Washington. Shell Oil Company has been doing business in Washington since at least the 1930s.

108. Shell, through its subsidiaries and agents, engages in oil refining and accounts for a total capacity of 426,400 barrels per day.[118] Shell Oil Products US operates Shell's Puget Sound Refinery, on March Point, located outside of Anacortes.[119] Shell has been operating the Puget Sound Refinery since at least the 1950s. The Puget Sound refinery has a capacity of over 145,000 barrels a day.[120] Shell's website states that it "has been a proud member of the Pacific Northwest community for over 60 years."[121] Shell's website also touts that the "Puget Sound

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[116] Oliver Gill, "Stranded reserves" due to climate change? Not likely, says Shell boss, CITY A.M., Nov. 26, 2016, http://www.cityam.com/254454/stranded-reserves-due-climate-change-not-likely-says-shell.

[117] Shell, *A Better Life with a Health Planet: Pathways to Net-Zero Emissions* 3 (May 2016), http://www.shell.com/promos/new-report--a-better-life-with-a-healthy-planet/_jcr_content.stream/1475857466913/a1aa5660d50ab79942f7e4a629fcb37ab93d021afb308b92c1b77696ce6b2ba6/scenarios-nze-brochure-interactive-afwv9-interactive.pdf.

[118] Refining History, *supra* note 23, at 5.

[119] *Id.* at 6; Shell, *Puget Sound Refinery*, https://www.shell.us/about-us/projects-and-locations/puget-sound-refinery.html (last visited May 8, 2018).

[120] Refining History, *supra* note 23, at 7.

[121] Shell, *Shell Aids Recovery of Pacific Northwest's Most Iconic Species*, https://www.shell.us/sustainability/conservation/conservation-activities/shell-aids-recovery-of-killer-whales.html (last accessed May 8, 2018).

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Refinery produces roughly 25 percent of Pacific Northwest's fuel."[122] According to Shell's website, the refinery receives its crude oil via marine tankers that unload at its dock, and via a pipeline that serves Canadian oil fields.[123]

109. In 1955 Shell built the adjacent Anacortes Refinery, which has a capacity of 120,000 barrels per day.[124] Shell owned and operated the refinery until 1998.[125] Shell, through its subsidiary and agent, Shell Oil Products US, owns a petroleum products terminal (T-91-WA-4408) in Seattle.[126] Shell has owned and/or operated other gasoline terminals in Washington through its subsidiary and agent Equilon Enterprises LLC, including the Anacortes terminal at Marches Point Five Miles, and the Tumwater terminal at 7370 Linderson Way SW.

110. Shell's subsidiaries and agents Equilon Pipeline Company, LLC, and Equilon Enterprises, LLC, owned, managed, and/or operated the Olympic Pipeline in Washington carrying fossil fuel products including gasoline from at least approximately 1991 through 2000. On June 10, 1999, the pipeline ruptured, causing a gasoline explosion in Bellingham, resulting in the release of approximately 236,000 gallons of gasoline into nearby creeks, killing two 10-year-old boys and an 18-year-old man, and extensively damaging the waters, shorelines, and other natural resources. Equilon Pipeline Company, Olympic's owner at the time, paid a $15 million criminal fine and $10 million civil penalty.

111. Shell, including through its subsidiary and agent Equilon Enterprises, LLC, operates and leases from Exxon a portion of the Pier 15 petroleum facility in Seattle on Elliot Bay that is used for receipt and shipment of petroleum products.

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[122] https://www.shell.us/about-us/projects-and-locations/puget-sound-refinery/puget-sound-refinery-news-events/crude-by-rail-project-suspended.html.

[123] *Id.*

[124] Refining History, *supra* note 23, at 7, 31.

[125] *Id.* at 27 and n.112.

[126] IRS Approval Terminals, *supra* note 100; Washington State Department of Ecology, *Shell Oil Harbor Island Terminal*, https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=5051 (last visited May 8, 2018).

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112. Shell subsidiaries and agents Equilon Enterprises LLC (also known as Shell Oil Products US), and Shell Trading (US) Company are currently licensed as fuel suppliers and aircraft fuel distributors in Washington, and Equilon Enterprises LLC also has a fuel terminal license in Washington. A supplier license allows the purchase and storage of fuel within the bulk transfer-terminal system, and also allows for import and export of fuel. An aircraft fuel distributor license allows for the purchase of aircraft fuel for resale.

113. Shell subsidiary and agent Shell Energy North America (US), L.P. has an office located at 601 W 1st Avenue in Spokane, Washington, and engages in fossil fuel-related activities, including natural gas distribution and marketing.

114. There are numerous Shell-branded gasoline stations in Washington, including in King County. Shell's website lists hundreds of Shell gas stations in Washington State.[127] Shell exercises control over gasoline product quality and specifications at Shell-branded retail stations. Shell-branded retail stations display the trademark of Shell and can only sell gasoline that contains Shell's proprietary additives—the additives that distinguish otherwise fungible gasoline as gasoline that can be sold at Shell-branded retail stations. Shell offers credit cards to consumers on its interactive website to promote sales of gasoline and other products at its branded gasoline stations, including Shell-branded retail stations in Washington. Shell promotes gasolines sales by offering consumers, through its interactive website, cents per gallon discounts off every gallon of Shell Fuel for the first two months after they open an account, including Shell-branded retail stations in Washington. Shell, including through its subsidiary and agent Shell Oil Company, previously owned retail gasoline stations in Washington, including in Snohomish, King, and Pierce counties. Shell, through its subsidiaries and agents, including Equilon Enterprises LLC, has entered into contracts with distributors for delivery of Shell-branded gasoline to Shell-branded retail gasoline stations in Washington. Shell, including through its agent and subsidiary Equilon Enterprises LLC, has entered into contracts with

[127] https://www.shell.us/motorist/gas-station-near-me.html.

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individuals and/or entities to own, lease, and/or operate Shell-branded retail gasoline stations, sell Shell-branded gasoline, and to use and display Shell's logos and trademarks in Washington.

115. Shell does business in the United States, including through its subsidiaries and agents. Shell operates in all 50 states and employs more than 20,000 people in the United States.

116. Shell had 854 million barrels of oil equivalent proved reserves for crude oil and natural gas in the United States as of December 31, 2017, and an additional 488 million barrels of oil equivalent of proved undeveloped reserves in the United States. Shell, including through its subsidiaries and agents, has approximately 30,000 mineral leases with nearly 1.5 million net mineral acres for shales, and has interests in more than 2,300 productive wells and operates four central processing facilities. Nearly 70% of Shell's proven shale reserves worldwide are in the United States, and 88% of its shales liquids proved reserves are in the United States. Shell's share of shales production averaged 137,000 barrels of oil equivalent per day in 2017.

117. Since 1915, Shell, including through its subsidiaries, predecessors and agents has owned a gasoline refinery in Martinez, California, thirty miles northeast of San Francisco. In 1913, the Royal Dutch/Shell Group built a shipping terminal that would become the Shell Oil Terminal Martinez for the purpose of importing and distributing gasoline along the United States Pacific Coast. Shell, including through its subsidiaries, agents and predecessors, including Shell Oil Products US, Shell Company of California, Shell Oil Company, Inc. and Shell Oil Co., previously owned and operated the Carson Refinery from approximately 1923 through 1992, where crude oil was refined into finished fossil fuel products including gasoline. In 1992, Shell decommissioned the refinery and began operating the over 400-acre facility as a distribution facility for receipt and distribution of fossil fuels throughout the Southern California region via pipeline and truck delivery. Shell states the "Shell Carson facility is connected to an extensive industry infrastructure network of major local refiners, pipelines, terminals, a rail facility and the

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Shell Mormon Island Marine Terminal."[128] Shell's "Southern California Products System is part of a network that provides unequaled access to key refining centers and markets in North America."[129] Shell, including through its subsidiaries, agents and predecessors, including Equilon Enterprises and Shell Oil Company, previously owned and operated the Wilmington refinery in California from approximately 1998 through 2007, with a processing capacity of approximately 98,000 barrels of crude oil per day, and where crude oil was refined into finished fossil fuel products, including gasoline. Shell, including through its subsidiaries, agents and predecessors, including Equilon and Shell Oil Company, previously owned and operated the Bakersfield refinery in California from approximately 2000 through 2005, where crude oil was refined into finished fossil fuel products including gasoline. As of 2005, the Bakersfield refinery had a capacity of 70,000 barrels per day, and after its sale, Shell continued to own and operate certain pipelines serving the refinery, the nearby Bakersfield Products Terminal and entered into an offtake agreement to receive finished fossil fuel products from the new refinery owner. Shell, including through its subsidiaries and agents, produces natural gas in the Marcellus and Utica formations in Pennsylvania and Ohio, and owns approximately 850,000 acres in Pennsylvania, Ohio and New York.

118. Shell, through its subsidiaries and agents, including Shell Pipeline Company LP, has owned and/or operated fossil fuel pipelines in the United States for 95 years. Shell currently owns and operates seven tank farms across the U.S., and transports more than 1.5 billion barrels of crude oil and refined products annually through 3,800 pipeline miles across the Gulf of Mexico and five states. In addition, Shell has non-operated ownership interests in an additional 8,000 pipeline miles. The pipelines carry more than 40 different kinds of crude oil and more than 20 different grades of gasoline, as well as diesel fuel and jet fuel.

[128] Shell, *Carson Refinery Products and Services*, https://www.shell.us/about-us/projects-and-locations/shell-in-carson-southern-california/carson-refinery-products-and-services.html (last visited August 17, 2018).

[129] *Id.*

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119. There are more than 10,000 Shell-branded retail gasoline stations in the United States. Shell exercises control over gasoline product quality and specifications at Shell-branded retail stations. Shell-branded retail stations display the trademark of Shell and can only sell gasoline that contains Shell's proprietary additives—the additives that distinguish otherwise fungible gasoline as gasoline that can be sold at Shell-branded retail stations.

III. JURISDICTION AND VENUE

120. Jurisdiction is proper in Washington Superior Court, King County, where this case was originally filed, because Defendants have contributed to the creation of a public nuisance in King County, and the King County Attorney has the right and authority to seek remedies for that nuisance. Defendants have removed to this Court and the Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. § 1332. Plaintiff is a citizen of Washington for purposes of diversity jurisdiction while Defendants are citizens of California, Delaware, New Jersey, Texas, and foreign countries England and the Netherlands. The amount in controversy exceeds $75,000, exclusive of interest and costs.

121. Venue is proper in this judicial district because the action was removed to this district court located where the state action was pending. 28 U.S.C. §§ 1390(c), 1441(a). Alternatively, venue is proper in this judicial district pursuant to: 1) 28 U.S.C. § 1391(b)(1) because all defendants reside in this judicial district as that term is defined in 28 U.S.C. § 1391(c) and other law, and 2) 28 U.S.C. § 1391(b)(2) because a substantial part of the events and omissions giving rise to the claims occurred in this district, and because a substantial part of the property that is the subject of the action is situated in this district.

IV. FOSSIL FUELS ARE THE PRIMARY CAUSE OF GLOBAL WARMING

122. Production of fossil fuels for combustion causes global warming. When used as intended, fossil fuels release greenhouse gases, including carbon dioxide (CO_2) and methane, which trap atmospheric heat and increase global temperatures. Carbon dioxide is by far the most important greenhouse gas because of the combustion of massive amounts of fossil fuels.

123. Scientists have known for over a century that the use of fossil fuels emits carbon dioxide and that carbon dioxide is a greenhouse gas.

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124. In 1896, Svante Arrhenius, a Nobel-prize winning scientist, published calculations projecting temperature increases that would be caused by increased carbon dioxide concentrations in the atmosphere due to the burning of fossil fuels.[130]

125. By 1957, scientists at the Scripps Institute published a warning in the peer-reviewed literature that global warming "may become significant during future decades if industrial fuel combustion continues to rise exponentially" and that "[h]uman beings are now carrying out a large scale geophysical experiment" on the entire planet.[131]

126. In 1960, scientist Charles D. Keeling published results establishing that atmospheric carbon dioxide concentrations were in fact rising.[132]

127. By 1979, the National Academy of Sciences, which is charged with providing independent, objective scientific advice to the United States government, concluded that there was "incontrovertible evidence" that carbon dioxide levels were increasing in the atmosphere as a result of fossil fuel use, and predicted that a doubling of atmospheric carbon dioxide would cause an increase in global surface temperatures of between 1.5°C and 4.5°C (2.7°F and 8.1°F), with a probable increase of 3°C (5.4°F).[133]

128. In 1983, the United States Environmental Protection Agency ("EPA") issued a landmark report, which confirmed both that "increases in atmospheric CO_2 primarily result from

[130] Arrhenius, Svante (1896). "On the Influence of Carbonic Acid in the Air Upon the Temperature of the Ground." *Philosophical Magazine and Journal of Science* 41: 237-76, available at http://www.rsc.org/images/Arrhenius1896_tcm18-173546.pdf.

[131] Revelle, Roger, and Hans E. Suess (1957). "Carbon Dioxide Exchange between Atmosphere and Ocean and the Question of an Increase of Atmospheric CO_2 During the Past Decades." *Tellus* 9: 18-27, available at http://onlinelibrary.wiley.com/doi/10.1111/j.2153-3490.1957.tb01849.x/epdf.

[132] Keeling, Charles D. (1960). "The Concentration and Isotopic Abundances of Carbon Dioxide in the Atmosphere." *Tellus* 12: 200-203, available at http://onlinelibrary.wiley.com/doi/10.1111/j.2153-3490.1960.tb01300.x/epdf.

[133] *See* Carbon Dioxide and Climate, *supra* note 1, at vii, 16.

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the use of fossil fuels" and that such "increases in atmospheric carbon dioxide (CO_2) and other 'greenhouse' gases will substantially raise global temperatures."[134]

129. In 1988, NASA scientist Dr. James E. Hansen testified to the U.S. Senate's Energy and Natural Resources Committee that "[t]he greenhouse effect has been detected, and it is changing our climate now."[135]

130. More recent research has confirmed and expanded on these earlier findings. In 1988, the United Nations established the Intergovernmental Panel on Climate Change ("IPCC") to assess the scientific and technical information relevant to global warming, and to provide advice to all parties to the U.N. Framework Convention on Climate Change, including the United States. The IPCC issues periodic assessment reports, which have become the standard scientific references on global warming. Defendant Exxon has recognized that the IPCC is the leading scientific authority on climate change.

131. In 1990, the IPCC issued its First Assessment Report ("FAR"). It stated that "we are certain" that "emissions resulting from human activities are substantially increasing the atmospheric concentrations of the greenhouse gases," including carbon dioxide and methane, and that "these increases will enhance the greenhouse effect, resulting on average in an additional warming of the Earth's surface."[136] The IPCC's FAR also predicted that a "Business-as-Usual" scenario (*i.e.*, a future in which fossil fuel production and associated emissions continue to increase) would cause global mean temperature during the next century to increase at a rate "greater than that seen over the past 10,000 years," and "will result in a likely increase in global mean temperature of about 1°C [1.8°F] above the present value by 2025 and 3°C [5.4°F] before

[134] United States EPA, *Can We Delay a Greenhouse Warming?* (Sept. 1983), available at https://bit.ly/2gRItN1.

[135] *Greenhouse Effect & Global Climate Change: Hearing Before the S. Comm. on Energy & Natural Resources*, 100th Cong. 40 (1988) (statement of Dr. James Hansen, Director, NASA Goddard Institute for Space Studies).

[136] IPCC Working Group I, CLIMATE CHANGE: THE IPCC SCIENTIFIC ASSESSMENT at xi (J.T. Houghton et al. eds., Cambridge University Press 1990), available at https://www.ipcc.ch/ipccreports/far/wg_I/ipcc_far_wg_I_spm.pdf.

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the end of the next century"—higher than temperatures have been in the last 150,000 years.[137] The FAR also predicted that business-as-usual would result in substantial sea level rise by 2100.[138]

132. The FAR further stated "with confidence" that continued emissions of carbon dioxide "at present rates would commit us to increased concentrations for centuries ahead," and that immediate reductions were required to stabilize carbon dioxide concentrations.

133. In 1995, in its Second Assessment Report ("SAR"), the IPCC concluded that the "balance of evidence suggests a discernible human influence on global climate." This causal finding was profoundly important as confirmation that human-caused global warming had now been detected. By 2001, the IPCC strengthened its causal conclusion, stating that "there is new and stronger evidence that most of the observed warming observed over the last 50 years is attributable to human activities" and that it was "likely" (meaning a 66% to 90% chance of being true) that the observed warming was "due to the increase in greenhouse gas concentrations."[139] The U.S. National Academy of Sciences reviewed this finding and concluded that it was accurate.[140]

134. The IPCC issued its most recent report, the Fifth Assessment, in 2013–2014. It states that it is "extremely likely" (95 to 100 percent likely) that "human influence has been the dominant cause of the observed warming since the mid-20th century."[141] And the federal government's Fourth National Climate Assessment Report, issued in the fall of 2017 states:

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[137] *Id.* at xi, xxviii.

[138] *Id.* at xi.

[139] IPCC Working Group I, Intergovernmental Panel on Climate Change, CLIMATE CHANGE 2001, THE SCIENTIFIC BASIS at ix, 10 (J.T. Houghton et al. eds., Cambridge University Press 2001), available at https://www.ipcc.ch/ipccreports/tar/wg1/pdf/WG1_TAR-FRONT.PDF.

[140] National Research Council, CLIMATE CHANGE SCIENCE: AN ANALYSIS OF SOME KEY QUESTIONS 1 (The National Academies Press 2001).

[141] IPCC Working Group I, Intergovernmental Panel on Climate Change, CLIMATE CHANGE 2013, THE PHYSICAL SCIENCE BASIS 17 (Thomas F. Stocker et al. eds., Cambridge University Press 2017), available at https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_SPM_FINAL.pdf.

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"This assessment concludes, based on extensive evidence, that it is extremely likely that human activities, especially emissions of greenhouse gases, are the dominant cause of the observed warming since the mid-20th century. For the warming over the last century, there is no convincing alternative explanation supported by the extent of the observational evidence."[142]

135. Upon information and belief, Defendants have maintained scientific staffs for decades who have kept track of the climate science as these warnings and conclusions have been issued.

136. The increase in atmospheric carbon dioxide caused by the combustion of fossil fuels has been clearly documented—and measured. Carbon dioxide from fossil fuels has a chemical fingerprint and is the culprit; natural sources of carbon dioxide were in balance prior to the use of fossil fuels and are not a cause of the global warming problem. Today, due primarily to the combustion of fossil fuels produced by Defendants and others, the atmospheric level of carbon dioxide is 410 ppm, higher than at any time during human civilization and likely higher than any level in millions of years.[143] The result has been dramatic planetary warming: sixteen of earth's seventeen warmest years in the 136-year period of global temperature measurements have occurred since 2001, and 2016 was the warmest year on record.[144] As of June 2018, there were 402 months in a row that were warmer than the 20th century average.[145] The years 2014,

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[142] Donald J. Wuebbles et al., U.S. Global Change Research Program, CLIMATE SCIENCE SPECIAL REPORT: FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME I at 12-34 (2017), available at https://science2017.globalchange.gov/chapter/executive-summary/.

[143] Brian Kahn, *We Just Breached the 410 PPM Threshold for CO_2*, SCIENTIFIC AMERICAN (Apr. 21, 2017), available at https://www.scientificamerican.com/article/we-just-breached-the-410-ppm-threshold-for-co2/.

[144] Griggs et al., *Rising Seas in California: an update on sea-level rise science* 14 (Apr. 2017), available at http://www.opc.ca.gov/webmaster/ftp/pdf/docs/rising-seas-in-california-an-update-on-sea-level-rise-science.pdf.

[145] NOAA, State of the Climate: Global Climate Report for June 2018, available at https://www.ncdc.noaa.gov/sotc/global/201806.

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2015, and 2016 were the three hottest years ever recorded in Washington since modern temperature records were first taken in 1895.[146] Washington warmed over 1.5°F since 1895.[147]

137. Global warming is most commonly expressed in terms of a global average temperature change. Until recently, the global average temperature was quite stable over the past 10,000 years. However, the global average temperature has increased over the last century by 1.8°F (1°C)—an extraordinarily rapid and unprecedented rate of change not seen in thousands of years of human history. Most of this warming has occurred since 1970. GHG pollution from the burning of fossil fuels is the dominant cause. By way of comparison, the global average temperature at the depths of the last ice age 20,000 years ago was only about 7°F to 11°F cooler than today, a time when King County was buried under the Cordilleran Ice Sheet. Thus, differences of just a few degrees in global average temperature constitute dramatic changes to our climate, and are the difference between our current climate, an ice age, and the catastrophic changes that global warming threatens to bring in the future. Globally, approximately 1°C (1.8°F) of the temperature rise already has occurred, due primarily to carbon dioxide and methane emissions from the combustion and use of fossil fuels.

138. Ongoing and future warming caused by past and ongoing use of massive quantities of fossil fuels will cause increasingly severe harm to King County through accelerating sea level rise, among other impacts. In 2013, the IPCC projected that between 2081 and 2100, the global average surface temperature will have increased by 4.7°F to 8.6°F under business-as-usual, *i.e.*, with continued massive levels of fossil fuel production. Global warming causes sea level rise by melting glaciers and sea ice, and by causing seawater to expand.[148] This

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[146] NOAA, National Centers for Environmental Information, available at https://www.ncdc.noaa.gov/temp-and-precip/climatological-rankings/index.php?periods%5B%5D=12&parameter=tavg&state=4&div=0&month=12&year=2016#ranks-form.

[147] NOAA Climate at a Glance, https://www.ncdc.noaa.gov/cag/statewide/time-series/45/tavg/12/12/1895-2017?base_prd=true&firstbaseyear=1901&lastbaseyear=2000&trend=true&trend_base=10&firsttrendyear=1895&lasttrendyear=2017/; *see also* Snover, *infra* note 243.

[148] IPCC, *Climate Change 2013, The Physical Science Basis*, *supra* note 141, at 11.

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acceleration of sea level rise is unprecedented in the history of human civilization. Since 1990, the rate of sea level rise has more than doubled and it continues to accelerate. The rate of ice loss from the Greenland and Antarctic Ice Sheets is increasing, and these ice sheets soon will become the primary contributor to global sea level rise. In July 2018, the Washington Coastal Resilience Project released a new report on projected sea level rise in Washington state.[149] The report's authors explained that "[r]ecent research has emphasized the potential for large amounts of sea level rise, and today's high-end projections are much higher than those of previous studies."[150] With production of fossil fuels continuing on its business-as-usual trajectory (high emissions scenario), relative sea level rise is projected to continue rising through the 21st century, increasing by as much as 8.6 feet by 2100 (relative to the average sea level over the 19-year period 1991-2009) in the Puget Sound region near Seattle.[151] This understates the human-driven/fossil fuel warming impact because the baseline period itself (*i.e.* 1991 to 2009) includes a period of significant human-induced warming. This would be catastrophic for King County and the region.

139. The Earth's climate can undergo an abrupt and dramatic change when a radiative forcing agent, such as carbon dioxide, causes the climate system to reach a tipping point. Defendants' massive production of fossil fuels increases the risk of reaching that tipping point, triggering a sudden and potentially catastrophic change in climate. The rapidity of an abrupt climate shift would magnify all the adverse effects of global warming. Crossing a tipping point threshold also could lead to rapid disintegration of ice sheets on Greenland and/or Antarctica, resulting in large and rapid increases in sea level rise.

[149] Miller, I.M., Morgan, H., Mauger, G., Newton, T., Weldon, R., Schmidt, D., Welch, M., Grossman, E. 2018. Projected Sea Level Rise for Washington State – A 2018 Assessment. A collaboration of Washington Sea Grant, University of Washington Climate Impacts Group, Oregon State University, University of Washington, and US Geological Survey. Prepared for the Washington Coastal Resilience Project ("2018 Sea Level Rise Assessment"). Available at http://www.wacoastalnetwork.com/files/theme/wcrp/SLR-Report-Miller-et-al-2018.pdf.

[150] *Id.* at 10.

[151] *Id.* at 14, 19.

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V. DEFENDANTS HAVE PRODUCED MASSIVE QUANTITIES OF FOSSIL FUELS AND HAVE CONTINUED TO DO SO EVEN AS GLOBAL WARMING HAS BECOME GRAVELY DANGEROUS

140. For many years, Defendants have produced massive quantities of fossil fuels that, when combusted, emit carbon dioxide, the most important greenhouse gas. Each of the Defendants, including through their predecessor companies, subsidiaries, and agents, upon information and belief, have been producing fossil fuels continuously for over a hundred years. Additionally, one of Defendants' primary fossil fuel products, natural gas, is composed of methane, which is the second most important greenhouse gas and which, as Defendants know, routinely escapes into the atmosphere from facilities operated by Defendants' customers and also from consumer use. The greenhouse gases from the usage of Defendants' fossil fuels remain in the atmosphere for long periods of time: a substantial portion of carbon dioxide emissions remains in the atmosphere for over 1,000 years after they are emitted.[152] As noted above, Defendants have produced such vast quantities of fossil fuels that they are five of the ten largest producers in all of history, with most of the carbon dioxide that has built up in the atmosphere from the use of their products dating from 1980 or later.

141. Each defendant has produced fossil fuels, which are used exactly as intended and emit carbon dioxide, a greenhouse gas. Each defendant's overall course of conduct, a part of which has taken place in Washington, has caused plaintiff's injuries. The cumulative greenhouse gases in the atmosphere attributable to each Defendant has increased the global temperature and contributed to sea level rise, including in King County. According to published, peer-reviewed research, the proportional increase in atmospheric carbon dioxide, global mean surface temperature, and global sea level from emissions traced to major carbon producers, including each defendant, is "quantifiable and substantial."[153] According to this same research, each defendant, as measured by the cumulative carbon and methane pollution generated from the use

[152] IPCC, *Climate Change 2013, The Physical Science Basis*, *supra* note 141, at 28.

[153] Brenda Ekwurzel, et al., *The rise in global atmospheric CO2, surface temperature, and sea level from emissions traced to major carbon producers*, 144 CLIMATIC CHANGE 579–590, Fig. 2 (Oct. 2017), https://link.springer.com/content/pdf/10.1007%2Fs10584-017-1978-0.pdf.

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of their fossil fuels from 1880-2010 ("carbon pollution") has caused a substantial percentage of the increase in global mean surface temperature from 1880-2010 of up to 3.67% (Chevron), 3.41% (Exxon), 2.62% (BP), 2.27% (Shell), and 1.23% (ConocoPhillips). Also according to this peer-reviewed research, each defendant, as measured by its carbon pollution, has caused a substantial percentage of the increase in global sea level rise from 1880-2010 of up to 4.03% (Chevron), 3.41% (Exxon), 2.45% (BP), 2.13% (Shell), and 1.11% (ConocoPhillips).

142. Once Defendants produce fossil fuels by, for example, extracting oil from the ground, those fossil fuels are used exactly as intended and emit carbon dioxide.

143. Defendants are quantitatively and qualitatively different from other contributors to global warming:

a) Recent research demonstrates that just 100 fossil fuel producers are responsible for 62% of all greenhouse gas emissions from industrial sources since the dawn of the Industrial Revolution and for 71% of emissions since 1988, that over 90% of these emissions are attributable to the fossil fuels that they produce and sell (rather than emit from their own operations), and that most of these emissions have occurred since 1988.

b) Among these 100 producers, Defendants are the five largest, investor-owned producers of fossil fuels in the world, as measured by the cumulative carbon and methane pollution generated from the use of their fossil fuels, according to published, peer-reviewed research.[154] Upon information and belief, Defendants are, respectively, the first (Chevron), second (Exxon), fourth (BP), sixth (Shell) and ninth (ConocoPhillips) largest cumulative producers of fossil fuels worldwide from the mid-19th century to present.

c) Defendants are collectively responsible, through their production, marketing, and sale of fossil fuels, for over 11% of all the carbon and methane pollution from industrial sources that has accumulated in the atmosphere since the dawn of the Industrial Revolution.[155]

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[154] Richard Heede, *Tracing Anthropogenic Carbon Dioxide and Methane Emissions to Fossil Fuel and Cement Producers, 1854–2010*, 122 CLIMATIC CHANGE 229–241 (Jan. 2014).

[155] *Id.*

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d) Despite their internal warnings, an overwhelming scientific consensus on the unfolding imminent catastrophe, and actual gravely dangerous impacts from global warming, Defendants to this day maintain high levels of fossil fuel production. For example, in 2017, each of the five Defendants produced between 1.4 million and 4.0 million barrel of oil equivalents *per day*. This production will intensify future warming and King County's injuries, including from sea level rise.

e) Defendants, moreover, are qualitatively different from other contributors to the harm given their in-house scientific resources, early knowledge of global warming, commercial promotions of fossil fuels as beneficent even in light of their knowledge to the contrary, and efforts to protect their fossil fuel market by downplaying the risks of global warming.

f) Defendants have in the last ten years or more produced large amounts of unconventional, high carbon-intensity fossil fuels—*i.e.*, fuels that are responsible for more carbon emitted per unit of energy than other fuels, and that therefore contribute disproportionately to global warming. For example, Chevron, Exxon, BP, and ConocoPhillips produce significant amounts of fossil fuels from tar sands in Canada. Shell, until recently, was also responsible for significant tar sands production. Exxon has publicly promoted tar sands production as "a significant, secure energy source for the United States," and ConocoPhillips has said this production is "a significant part of the world's energy future."[156]

g) Defendants' conduct will continue to cause ongoing and increasingly severe harms to King County because Defendants are committed to a business model of massive fossil fuel production that they know causes a gravely dangerous rate of global warming. The following graph from a 2015 study published in the peer-reviewed scientific literature

[156] Exxon, *Canadian Oil Sands*, http://aboutnaturalgas.com/en/current-issues/oil-sands/canadian-oil-sands/overview (last visited May 8, 2018); ConocoPhillips Canada, *Oil Sands*, http://www.conocophillips.ca/our-operations/oil-sands/Pages/default.aspx (last visited Jan. 9, 2018).

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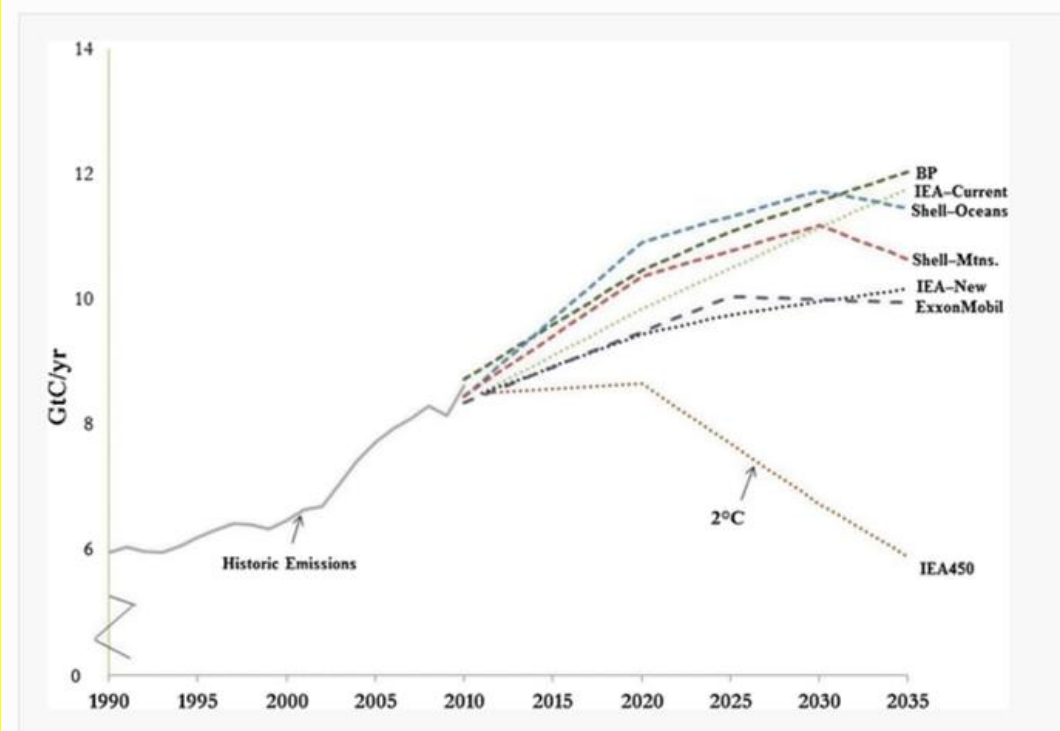
demonstrates the grave indifference Defendants BP, Shell, and Exxon have for human safety and welfare.



The graph compares BP, Exxon, and Shell's projections of worldwide total future emissions[157]—projections upon which they make long-term business plans—to the International Energy Agency ("IEA") 450 emissions trajectory necessary to prevent global warming from exceeding a 2°C (3.6°F) increase over the pre-industrial temperature.[158] The 2°C level of global warming is widely considered to be a red line of highly dangerous global warming. Upon information and belief, all Defendants base their long-term business plans upon similar projections.

VI. DEFENDANTS HAVE PRODUCED MASSIVE AMOUNTS OF FOSSIL FUELS DESPITE HAVING FULL KNOWLEDGE FROM THEIR IN-HOUSE SCIENTIFIC STAFF, OR FROM THE API, THAT FOSSIL FUELS WOULD CAUSE GLOBAL WARMING

144. For decades, Defendants have known that their fossil fuel products pose risks of "severe" and even "catastrophic" impacts on the global climate through the work and warnings

[157] In gigatons of carbon per year.

[158] Peter C. Frumhoff, et al., *The climate responsibilities of industrial carbon producers*, 132 CLIMATIC CHANGE 157, 167 (Sept. 2015), available at https://link.springer.com/article/10.1007/s10584-015-1472-5.

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of their own scientists and/or through their trade association, the API. Defendants, large and sophisticated companies devoted to researching significant issues relevant to fossil fuels, also were aware of significant scientific reports on climate change science and impacts at the time they were issued. Yet each Defendant decided to continue its conduct and commit itself to massive fossil fuel production. This was a deliberate decision to place company profits ahead of human safety and well-being and property, and to foist onto the public the costs of abating and adapting to the public nuisance of global warming.

145. The API is a national trade association that represents the interests of America's oil and natural gas industry, including foreign-based companies that produce and market fossil fuels in the United States. At all relevant times, Defendants, their corporate predecessors, and/or their operating subsidiaries over which they exercise substantial control, have been members of the API. On information and belief, the API has acted as Defendants' agent with respect to global warming, received funding from Defendants for the API's global warming initiatives, and shared with Defendants the information on global warming described herein.

146. Beginning in the 1950s, the API repeatedly warned its members that fossil fuels posed a grave threat to the global climate.

147. The API's warnings to Defendants included:

a) In 1951, the API launched a project to research air pollution from petroleum products, and attributed atmospheric carbon to fossil fuel sources.[159] By 1968, the API's scientific consultant reported to the API that carbon dioxide emissions were "almost certain" to produce "significant" temperature increases by 2000, and that these emissions were almost certainly attributable to fossil fuels. The report warned of "major changes in the earth's

[159] Charles A. Jones (1958) A Review of the Air Pollution Research Program of the Smoke and Fumes Committee of the American Petroleum Institute, Journal of the Air Pollution Control Association, 8:3, 268-272, DOI: 10.1080/00966665.1958.10467854, available at https://www.smokeandfumes.org/#/documents/document9.

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environment" and a "rise in sea levels," and concluded: "there seems to be no doubt that the potential damage to our environment could be severe."[160]

b) Between 1979 and 1983, the API and Defendants, their predecessors, and/or agents formed a task force to monitor and share climate research, initially called the "CO2 and Climate Task Force" and later renamed the "Climate and Energy Task Force" ("Task Force"). The API kept and distributed meeting minutes to Task Force members that included, in addition to API representatives, scientists from Amoco (a predecessor to BP); Standard Oil of Washington, Texaco, and Gulf Oil Corp. (predecessors to Chevron); Exxon Research and Engineering and Mobil (predecessors to or subsidiaries of current Exxon); Shell; and others. In 1980, the Task Force invited Dr. J.A. Laurman, a "recognized expert in the field of CO_2 and climate," to make a presentation. Attendees to the presentation included scientists and executives from Texaco (a predecessor to Chevron), Exxon, and SOHIO (a predecessor to BP). Dr. Laurman's written presentation informed the Task Force that there was a "Scientific Consensus on the Potential for Large Future Climatic Response to Increased CO_2 Levels." He further informed the Task Force in his presentation that, though the exact temperature increases were difficult to predict, the "physical facts agree on the probability of large effects 50 years away." He warned the Task Force of a 2.5°C (4.5°F) global temperature rise by 2038, which would likely have "MAJOR ECONOMIC CONSEQUENCES," and a 5°C (9°F) rise by 2067, which would likely produce "GLOBALLY CATASTROPHIC EFFECTS." He also suggested that, despite uncertainty, "THERE IS NO LEEWAY" in the time for acting. API minutes show that the Task Force discussed topics including "the technical implications of energy source changeover," "ground rules for energy release of fuels and the cleanup of fuels as they relate to CO_2 creation," and researching "the Market Penetration Requirements of Introducing a New

[160] E. Robinson & R.C. Robbins, Final Report, Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants, SRI Project PR-6755, prepared for American Petroleum Institute, at 109-110, available at https://www.smokeandfumes.org/#/documents/document16.

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Energy Source into World Wide Use."[161] The Task Force even asked the question "what is the 50 year future of fossil fuels?"

(c) In March 1982, an API-commissioned report showed the average increase in global temperature from a doubling of atmospheric concentrations of CO_2 and projected, based upon computer modeling, global warming of between 2°C and 3.5°C (3.6°F and 6.3°F). The report projected potentially "serious consequences for man's comfort and survival," and noted that "the height of the sea level can increase considerably."[162]

148. On information and belief, Defendants were aware of the industry Task Force and API findings described above, which were distributed by the API to its members. Each Defendant (or its predecessor) was a member of the API at relevant times, or had a subsidiary that was a member of the API at relevant times. Each subsidiary passed on information it learned from the API on climate change to its parent Defendant (or Defendant's predecessor) and acted as the agent for its parent company, which remained in charge of setting overall production levels in light of climate change and other factors.

149. On information and belief, each Defendant was also actually aware (at the time they were made) of public statements on climate change described above, including the 1979 National Academy of Science findings and Dr. Hansen's 1988 testimony. Because these statements were centrally relevant to Defendants' ongoing investment of billions of dollars in fossil fuel production and billions of dollars in profits, and because Defendants employed experts charged with evaluating climate change and other energy and regulatory trends, Defendants were in a superior position to appreciate the threat described in these statements. Defendants' representatives attended congressional hearings on climate change beginning as early as the late 1970s.

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[161] CO_2 and Climate Task Force, Minutes of Meeting, at 1-2 & Attachment B, available at http://insideclimatenews.org/sites/default/files/documents/AQ-9%20Task%20Force%20Meeting%20%281980%29.pdf.

[162] API, Climate Models and CO_2 Warming, A Selective Review and Summary at 5, available at https://insideclimatenews.org/system/files_force/documents/API%201982%20Climate%20models%20and%20CO2%20warming.pdf?download=1.

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150. In addition to the API information, some of the Defendants produced their own internal analyses of global warming.

151. For example, newly disclosed documents demonstrate that Exxon internally acknowledged in the late 1970s and early 1980s that its products posed a "catastrophic" threat to the global climate, and that fossil fuel use would have to be strictly limited to avoid severe harm.

a) Exxon management was informed by its scientists in 1977 that there was an "overwhelming[]" consensus that fossil fuels were responsible for atmospheric carbon dioxide increases. The presentation summarized a warning from a recent international scientific conference that "IT IS PREMATURE TO LIMIT USE OF FOSSIL FUELS BUT THEY SHOULD NOT BE ENCOURAGED." The scientist warned management in a summary of his talk: "Present 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."[163]

b) In a 1979 Exxon internal memo, an Exxon scientist calculated that 80% of fossil fuel reserves would need to remain in the ground and unburned to avoid greater than a doubling of atmospheric carbon dioxide.[164]

c) In a 1981 internal Exxon memo, a scientist and director at the Exxon Research and Engineering Company warned that "it is distinctly possible" that CO_2 emissions "will later produce effects which will indeed be catastrophic (at least for a substantial fraction of the earth's population)."[165]

d) A year later, the same scientist wrote another memo to Exxon headquarters, which reported on a "clear scientific consensus" that "a doubling of atmospheric CO_2 from its pre-industrial revolution value would result in an average global temperature rise of

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[163] https://insideclimatenews.org/system/files_force/documents/James%20Black%20 1977%20Presentation.pdf at 2.

[164] https://insideclimatenews.org/sites/default/files/documents/CO2%20and%20Fuel%20Use%20Projections.pdf at 3.

[165] http://insideclimatenews.org/sites/default/files/documents/%2522Catastrophic%2522%20Effects%20Letter%20%281981%29.pdf.

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(3.0 ± 1.5)°C [2.7°F to 8.1°F]."[166] The clear scientific consensus was based upon computer modeling, which Exxon would later attack as unreliable and uncertain in an effort to undermine public confidence in climate science.[167] The memo continued: "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."

e) In November 1982, an Exxon internal report to management warned that "substantial climatic changes" could occur if the average global temperature rose "at least 1°C [1.8°F] above [1982] levels," and that "[m]itigation of the 'greenhouse effect' would require major reductions in fossil fuel combustion." The report then warns Exxon management that "there are some potentially catastrophic events that must be considered," including the risk that "if the Antarctic ice sheet which is anchored on land should melt, then this could cause a rise in sea level on the order of 5 meters." The report includes a graph demonstrating the expected future global warming from the "CO_2 effect" demonstrating a sharp departure from the "[r]ange of natural fluctuations." This graph is attached hereto as Exhibit 1.[168]

f) By 1983, Exxon had created its own climate models, which confirmed the main conclusions from the earlier memos. Starting by at least the mid-1980s, Exxon used its own climate models and governmental ones to gauge the impact that climate change would have on its own business operations and subsequently took actions to protect its own business assets based upon these modeling results.[169] Exxon and other major oil and gas companies, including Mobil and Shell, subsequently took actions to protect their own business assets based on these

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[166] Cohen memo to Natkin at 1 (Sept. 2, 1982), available at http://insideclimatenews.org/documents/consensus-co2-impacts-1982.

[167] *See infra* ¶ 160.

[168] M. B. Glaser, Memo to R.W. Cohen et al. on "CO_2 Greenhouse Effect," Nov. 12, 1982, at 2, 12-13, 28, available at http://insideclimatenews.org/sites/default/files/documents/1982%20Exxon%20Primer%20on%20CO2%20Greenhouse%20Effect.pdf.

[169] Sara Jerving et al., *What Exxon knew about the Earth's melting Arctic*, LOS ANGELES TIMES (Oct. 9, 2015), http://graphics.latimes.com/exxon-arctic/.

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modeling results, including raising the decks of offshore platforms, protecting pipelines from increasing coastal erosion, and designing helipads, pipelines, and roads in the warming Arctic.[170] In 1994, for example, Shell, Exxon, Conoco, and other oil and gas companies included climate change projections in their design of a natural gas pipeline leading from a North Sea offshore platform to the German coastline. In other words, the oil and gas industry, including Defendants, were engaging in climate change adaptation and resiliency measures decades ago, at the very same time they were pursuing a campaign designed to convince the public that the science was too uncertain to warrant fossil fuel reductions. These are similar to the kinds of climate change adaptation and resiliency measures that the County must now undertake in order to protect itself.

152. On April 5, 2018, investigative journalists disclosed previously unseen documents relating to Shell's early knowledge of climate change risks, in which Shell acknowledged that the "changes may be the greatest in recorded history."

a. Shell commissioned a "study of the greenhouse effect" at least as early as 1981.[171]

b. In 1988, Shell Internationale Petroleum Maatschappij B.V., based in The Hague, issued an internal report based upon 1986 research and prepared for the Shell Environmental Conservation Committee entitled "The Greenhouse Effect" that was marked "confidential."[172] The report stated that "fossil fuel combustion [is] the major source of CO2 in the atmosphere" and that there is "reasonable scientific agreement that increased levels of greenhouse gases would cause a global warming."[173] The Shell report stated: "It is generally accepted that the increasing concentration of CO2 in the atmosphere is primarily determined by

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[170] Amy Lieberman & Susanne Rust, *Big Oil Braced for Global Warming While it Fought Regulations*, L.A. TIMES (Dec. 31, 2015), http://graphics.latimes.com/oil-operations/.

[171] Shell Internationale Petroleum Maatschappij B.V., *The Greenhouse Effect* at 86 (May 1988), available at https://biotech.law.lsu.edu/blog/Shell_Climate_1988.pdf.

[172] Shell Internationale Petroleum Maatschappij B.V., *The Greenhouse Effect* (May 1988), available at https://biotech.law.lsu.edu/blog/Shell_Climate_1988.pdf.

[173] *Id.* at 1.

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the combustion of fossil fuels."[174] Shell's report recognized that an "overall reduction in fossil fuel use would of course reduce CO2 production," and "it is the world wide fossil fuel usage that affects the level of CO2 in the atmosphere."[175] Possible "Implications for Shell Companies" included "[c]hanging demand for our products."[176] The report concluded with a section entitled "Scope for Further Action," and divided those "who at least see substance" in the global warming problem into three groups. The second group was defined to include those "who believe that the threat is real, and seek to eliminate the problem," and listed as a potential action the "reduction of fossil fuel usage."[177] The third group was defined to include those "who believe that the threat is real and unavoidable, so that 'learning to live with climatic change' is the only solution," and listed as a potential action "[a]daptation to sea level rise through . . . construction of (higher) dikes."[178]

c. The 1988 Shell internal report stated that the "most sophisticated geophysical computer models predict that . . . a doubling of [the atmospheric CO2 concentration] could increase the global mean temperature by 1.3–3.3º C," and while it could not pinpoint the exact amount of future warming within this range, the "potential impacts are sufficiently serious for research to be directed more to the analysis of policy and energy options than to studies of what we will be facing exactly."[179] Based upon these same mathematical models, the projected warming "could create significant changes in sea level, ocean currents, precipitation patterns, regional temperature and weather." It warned: "These changes could be larger than any that have occurred over the last 12,000 years" and that such "relatively fast and dramatic changes would impact on the human environment, future living standards and food supplies."[180]

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[174] *Id.* at 17.
[175] *Id.* at 28.
[176] *Id.*
[177] *Id.* at 31.
[178] *Id.*
[179] *Id.* at 1.
[180] *Id.*

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d. The 1988 report further warned that the "rising level of atmospheric carbon dioxide" could have a "substantial impact on global habitability."[181] Shell stated that the "global rise in atmospheric CO2 is well documented," and that "[m]ore than a century ago it was already hypothesized that an increase in the CO2 concentration of the atmosphere would lead to global warming, *i.e.*, the so-called 'greenhouse effect.'"[182] The report predicted that "regional climatic changes" would occur caused by changes in global circulation patterns, and they "will be greater than the average global changes."[183] "Local temperature change" may necessitate "costly" adaptations, some of which would "drastically change the way people live and work."[184]

e. The Shell report also discussed the possibility of a large sea level rise: "a warming of 3°C would induce a 60-70 cm rise of the global sea level, about half of which would be due to ablation of the Greenland and Antarctic land ice, the rest to thermal expansion of the ocean; a possible subsequent disintegration of the West Antarctic Ice Sheet would result in a worldwide rise in sea level of 5-6 m[.]"[185] Under projected sea level rise, "[l]arge low-lying areas could be inundated (e.g. Bangladesh) and might have to be abandoned or protected effectively," and bays and estuaries could be "permanently inundated."[186]

f. Shell's report recognized that the future changes could be profound: "The changes may be the greatest in recorded history. They could alter the environment in such a way that habitability would become more suitable in the one area and less suitable in the other area. Adaptation, migration and replacement could be called for. All of these actions will be costly and uncertain, but could be made acceptable."[187] It continued: "While the greenhouse effect is a global phenomenon, the consequences and many of the socio-economic implications will be

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[181] *Id.* at 6.

[182] *Id.*

[183] *Id.* at 7.

[184] *Id.* at 27.

[185] *Id.* at 21.

[186] *Id.* at 26.

[187] *Id.* at 25.

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regional and local with large temporal and spatial variations."[188]

g. Shell also predicted that its own operations would be affected by sea level rise: "Direct operational consequences can be expected from a rising sea level, impacting offshore installations, coastal facilities and operations (e.g. platforms, harbours, refineries, depots) with an uncertain magnitude."[189]

h. The recent disclosures also demonstrate that as early as 1988 Shell was taking responsibility for companywide fossil fuel production.[190] The 1988 report expressly stated: "Fossil fuels which are marketed and used by the Group account for the production of 4% of the CO2 emitted worldwide from combustion."[191] The report also includes a table entitled "Contribution to global CO2 emissions from fuels sold by the Shell Group in 1984" that supports this same calculation.[192]

i. In a February 1995 Shell Management Brief on Climate Change, Shell stated that the "possibility of climate change caused by an enhanced greenhouse effect could have major business implications for the fossil fuel industry."[193] It continued: "There is a general consensus that human activities have contributed to an increase in atmospheric greenhouse gas concentrations."[194] And it stated that "Man's activities have contributed to emissions of [greenhouse] gases from the use of fossil fuels, particularly since the Industrial Revolution."[195] After reviewing evidence attempting to rebut the science of climate change, Shell concluded: "The arguments outlined in the last section may appear to represent a formidable case against the global warming hypothesis or at least in favour of a well-grounded

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[188] *Id.*

[189] *Id.* at 27.

[190] *Id.* at 57.

[191] *Id.* at 29.

[192] *Id.* at 57.

[193] Shell, *Climate Change* at 1 (Feb. 1995), available at https://assets.documentcloud.org/documents/4411100/Document12.pdf.

[194] *Id.*

[195] *Id.* at 2.

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skepticism. However, many of them raise questions or point to uncertainties rather than offer convincing alternative positions. Those who conclude that global warming is likely argue that uncertainty applies both ways – the effects could be larger than predicted."[196]

j. In a Shell "Group Scenarios 1998-2020" document, which "shows how the two [Shell] scenarios develop in selected regions of the world," Shell posits what would happen in 2010 if a "series of violent storms causes extensive damage to the eastern coast of the US," taking into account that "two successive IPCC reports since 1995 have reinforced the human connection to climate change."[197] Shell describes one possibility: "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."[198]

k. Shell produced a film on global warming in 1991, in which it admitted that there had been a "marked increase [in global temperatures] in the 1980s" and that the increase "does accord with computer models based on the known atmospheric processes and predicted buildup of greenhouse gases."[199] It acknowledged a "serious warning" that had been "endorsed by a uniquely broad consensus of scientists" in 1990. In the film, Shell further admits that by 2050 continued emissions of greenhouse gases at high levels would cause a global average temperature increase of 1.5 to 4°C (2.7 to 7.2°F); that one meter of sea level rise was likely in the next century; that "this could be disastrous;" and that there is a "possibility of change faster than at any time since the end of the ice age, change too fast, perhaps, for life to adapt without severe dislocation."

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[196] *Id.* at 3.

[197] Shell, *Group Scenarios 1998-2020, Volume 2: Regions and Quantification* at 115, available at https://assets.documentcloud.org/documents/4430284/27-2-Compiled.pdf.

[198] *Id.* at 118.

[199] https://www.youtube.com/watch?v=0VOWi8oVXmo.

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153. Exxon's and Shell's early research and understanding of the global warming impacts of its business was not unique among Defendants. For example, at least as far back as 1970, Defendant BP began funding scientific research in England to examine the possible future climate changes from greenhouse gas emissions.[200]

VII. DESPITE THEIR EARLY KNOWLEDGE THAT GLOBAL WARMING WAS REAL AND POSED GRAVE THREATS, DEFENDANTS PROMOTED FOSSIL FUELS FOR PERVASIVE USE WHILE DOWNPLAYING THE REALITY AND RISKS OF GLOBAL WARMING

154. Defendants have extensively promoted fossil fuel use in massive quantities through affirmative advertising for fossil fuels and downplaying global warming risks. First, Defendants promoted massive use of fossil fuels by misleading the public about global warming by emphasizing the uncertainties of climate science and through the use of paid denialist groups and individuals—a striking resemblance to Big Tobacco's propaganda campaign to deceive the public about the adverse health effects of smoking. Defendants' campaign inevitably encouraged fossil fuel consumption at levels that were (as Defendants knew) certain to severely harm the public. Second, Defendants' fossil fuel promotions through frequent advertising for their fossil fuel products, including promotions claiming that consumption at current and even expanded levels is "responsible" or even "respectful" of the environment, have encouraged continued fossil fuel consumption at massive levels that Defendants knew would harm the public.[201]

A. Defendants borrowed the Big Tobacco playbook in order to promote their products.

155. Notwithstanding Defendants' early knowledge of climate change, Defendants have engaged in advertising and communications campaigns intended to promote their fossil fuel products by downplaying the harms and risks of global warming. Initially, the campaign tried to show that global warming was not occurring. More recently, the campaign has sought to

[200] Sir Solly Zuckerman, Chief Scientist, Letter to Vice Chancellor, University of Bath, 9th May 1970, PRO ref CAB 163/272 #122885, "Long-term climate changes and their effects."

[201] ConocoPhillips, the changing energy landscape, available at http://www.conocophillips.com/who-we-are/our-company/spirit-values/responsibility/Pages/the-changing-energy-landscape.aspx; Chevron TV ad (2009), available at https://www.youtube.com/watch?v=-KyjTGMVTkA.

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minimize the risks and harms from global warming. The campaign's purpose and effect has been to help Defendants continue to produce fossil fuels and sell their products on a massive scale. This campaign was executed in large part by front groups funded by Defendants, either directly or through the API, and through statements made by Defendants directly.

156. One front group was the Global Climate Coalition ("GCC"). The GCC operated between 1989 and 2002. Its members included the API, and predecessors or subsidiaries of Defendants, with such subsidiaries acting as Defendants' agents. On information and belief, these members included BP America Inc. (a BP subsidiary that BP identifies as its U.S. agent); Amoco Corporation and the Atlantic Richfield Company (predecessors of BP); Texaco Inc. (a predecessor of Chevron) as well as Chevron itself; Phillips Petroleum (a predecessor of ConocoPhillips) and later ConocoPhillips itself; Exxon and its predecessors; and Shell Oil Company (Shell's main U.S. subsidiary). William O'Keefe, former president of the GCC, was also a former executive of the API; the first GCC director was an executive employed by Phillips Petroleum.[202]

157. The GCC spent millions of dollars on campaigns to discredit climate science, including $13 million on one ad campaign alone. The GCC distributed a video to hundreds of journalists, which claimed that carbon dioxide emissions would increase crop production and feed the hungry people of the world.[203]

158. However, internal GCC documents admitted that their "contrarian" climate theories were unfounded. In December 1995, the GCC's Science and Technology Advisory Committee ("GCC-STAC"), whose members included employees of Mobil Oil Corporation (an Exxon predecessor) and the API, drafted a primer on the science of global warming for GCC members. The primer concluded that the GCC's contrarian theories "do not offer convincing arguments against the conventional model of greenhouse gas emission-induced climate change."

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[202] Jeff Nesmith, *Industry Promotes Skeptical View of Global Warming*, COX NEWS SERVICE (May 28, 2003), available at http://www.heatisonline.org/contentserver/objecthandlers/index.cfm?ID=4450&Method=Full.

[203] SourceWatch, *Global Climate Coalition*, http://www.sourcewatch.org/index.php/Global_Climate_Coalition (last updated Oct. 11, 2017).

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Due to this inconvenient conclusion, at its next meeting, in January 1996, the GCC-STAC decided simply to drop this seven-page section of the report. Nonetheless, for years afterward, the GCC and its members continued to tout their contrarian theories about global warming, even though the GCC had admitted internally these arguments were invalid.

159. In February 1996, an internal GCC presentation summarized findings from the 1995 IPCC Second Assessment Report and stated that the projected temperature change by 2100 would constitute "an average rate of warming [that] would probably be greater than any seen in the past 10,000 years." The presentation noted "potentially irreversible" impacts and stated that predicted health impacts were "mostly adverse impacts, with significant loss of life." The document simultaneously reported the IPCC's scientific conclusions regarding climate change and laid out points for questioning those conclusions, including the IPCC's 1995 finding that human-induced global warming had now been detected even though the GCC-STAC had concluded just two months before that the contrarian theories of causation were scientifically unconvincing.

160. Over at least the last nineteen years, Exxon in particular has paid researchers and front groups to create uncertainties about basic climate change science and used denialist groups to attack well-respected scientists. These were calculated business decisions by Exxon to undermine climate change science and bolster production of fossil fuels.[204]

161. Between 1998 and 2014, Exxon paid millions of dollars to organizations to promote disinformation on global warming. During the early to mid-1990s, Exxon directed some of this funding to Dr. Fred Seitz, Dr. Fred Singer, and/or Seitz and Singer's Science and Environmental Policy Project ("SEPP") in order to launch repeated attacks on mainstream

[204] Neela Banerjee et al., *Exxon's Own Research Confirmed Fossil Fuels' Role in Global Warming Decades Ago*, INSIDE CLIMATE NEWS (Sept. 16, 2015), http://insideclimatenews.org/news/15092015/Exxons-own-research-confirmed-fossil-fuels-role-in-global-warming; Jeffrey Ball, *Exxon Chief Makes A Cold Calculation on Global Warming*, WALL STREET JOURNAL (June 14, 2005).

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climate science and IPCC conclusions, even as Exxon scientists participated in the IPCC.[205] Seitz, Singer, and SEPP had previously been paid by the tobacco industry to create doubt in the public mind about the hazards of smoking.[206] Seitz and Singer were not climate scientists.

162. Exxon's promotion of fossil fuels also entailed the funding of denialist groups that attacked well-respected scientists Dr. Benjamin Santer and Dr. Michael Mann, maligning their characters and seeking to discredit their scientific conclusions with media attacks and bogus studies in order to undermine the IPCC's 1995 and 2001 conclusions that human-driven global warming is now occurring.

163. One of Defendants' most frequently used denialists has been an aerospace engineer named Wei Hock Soon. Between 2001 and 2012, various fossil fuel interests, including Exxon and the API, paid Soon over $1.2 million.[207] Soon was the lead author of a 2003 article which argued that the climate had not changed significantly. The article was widely promoted by other denial groups funded by Exxon, including via "Tech Central Station," a website supported by Exxon.[208] Soon published other bogus "research" in 2009, attributing global warming to solar activity, for which Exxon paid him $76,106.[209] This 2009 grant was made several years after Exxon had publicly committed not to fund global warming deniers.[210]

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[205] Union of Concerned Scientists, *Smoke, Mirrors & Hot Air: How ExxonMobil Uses Big Tobacco's Tactics to Manufacture Uncertainty on Climate Science* (Jan. 2007), available at http://www.ucsusa.org/assets/documents/global_warming/exxon_report.pdf; Exxonsecrets.org, *Factsheet: Science and Environmental Policy Project, SEPP*, https://exxonsecrets.org/html/orgfactsheet.php?id=65 (last visited May 8, 2018).

[206] SourceWatch, *S. Fred Singer*, http://www.sourcewatch.org/index.php/S._Fred_Singer (last updated Oct. 11, 2017); SourceWatch, *Frederick Seitz*, http://www.sourcewatch.org/index.php/Frederick_Seitz (last updated June 26, 2017).

[207] Justin Gillis & John Schwartz, *Deeper Ties to Corporate Cash for Doubtful Climate Researcher*, NEW YORK TIMES (Feb. 21, 2015), https://www.nytimes.com/2015/02/22/us/ties-to-corporate-cash-for-climate-change-researcher-Wei-Hock-Soon.html.

[208] Smoke, Mirrors & Hot Air, *supra* note 205, at 13-14.

[209] https://www.documentcloud.org/documents/682765-willie-soon-foia-grants-chart-02-08-2011.html.

[210] Exxon, *2007 Corporate Citizenship Report* (Apr. 30, 2008), http://www.socialfunds.com/shared/reports/1211896380_ExxonMobil_2007_Corporate_Citizenship_Report.pdf.

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164. Until approximately early 2016, the API's website referred to global warming as "possible man-made warming" and claimed that the human contribution is "uncertain." The API removed this statement from its website in 2016 when journalistic investigations called attention to the API's misleading statements on global warming and its participation in the climate change Task Force during the late 1970s and early 1980s.

165. In 2000, Exxon took out an advertisement on the Op-Ed page of the New York Times entitled "Unsettled Science." The advertisement claimed that "scientists remain unable to confirm" the proposition that "humans are causing global warming."[211] This was six years after the IPCC had confirmed the causal link between planetary warming and anthropogenic greenhouse gas emissions—a historic moment in climate science—and some 18 years after Exxon itself had admitted in a 1982 internal memorandum to corporate headquarters that there was "a clear scientific consensus" that greenhouse gas emissions would cause temperatures to rise.

166. On May 27, 2015, at Exxon's annual shareholder meeting, then-CEO Rex Tillerson misleadingly downplayed global warming's risks by stating that climate models used to predict future impacts were unreliable: "What if everything we do it turns out our models were really lousy and we achieved all of our objectives and it turned out the planet behaved differently because the models just weren't good enough to predict it?" But as noted above, in 1982 Exxon's scientific staff stated, based upon the climate models, that there was a "clear scientific consensus" with respect to the level of projected future global warming and starting shortly thereafter Exxon relied upon the projections of climate models, including its own climate models, in order to protect its own business assets. Tillerson's statement reached consumers because it was reported in the press, including in Washington,[212] as is common when fossil fuel

[211] Exxon, *Unsettled Science*, available at https://assets.documentcloud.org/documents/705605/xom-nyt-2000-3-23-unsettledscience.pdf.

[212] *See, e.g.*, Joe Carroll & Bradley Olson, *Exxon, Chevron opt out of European Big Oil's climate huddle*, BLOOMBERG NEWS (May 27, 2015), available at https://www.seattletimes.com/business/exxon-chevron-opt-out-of-european-big-oils-climate-huddle/.

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company CEOs make statements regarding climate change and as Exxon had reason to know would occur.

167. Until approximately early 2017, Exxon's website continued to emphasize the "uncertainty" of global warming science and impacts: "current scientific understanding provides limited guidance on the likelihood, magnitude, or time frame" of events like temperature extremes and sea level rise.[213] Exxon's insistence on crystal-ball certainty was clear misdirection, since Exxon knew that the fundamentals of climate science were well settled and showed global warming to present a clear and present danger.[214]

B. Defendants' direct promotion of fossil fuels

168. Defendants continue to promote massive fossil fuel use by the public notwithstanding that global warming is happening, that global warming is primarily caused by their fossil fuels, and that global warming is causing severe injuries. Defendants promote the massive use of fossil fuels through advertisements lauding fossil fuels as "responsible" and "respectful" to the environment, identifying fossil fuels as the only way to sustain modern standards of living, and promoting sales of their fossil fuels without qualification. Defendants and/or their U.S. subsidiaries are members of the API. The API also promotes the benefits of fossil fuel products on behalf of Defendants and its other members.[215] Defendants' message to consumers is that fossil fuels may continue to be burned in massive quantities without risking significant injuries.

169. Defendants bombard the public and consumers with the following advertisements, although these are a mere sliver of Defendants' extensive campaigns. Defendants' advertisements must be understood in their proper context—as following Defendants' substantial

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[213] Formerly found at http://corporate.exxonmobil.com/en/current-issues/climate-policy/meeting-global-needs/managing-climate-change-business-risks.

[214] *See* IPCC, CLIMATE CHANGE 2014, IMPACTS, ADAPTATION, AND VULNERABILITY, Summary for Policymakers, available at http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/ar5_wgII_spm_en.pdf.

[215] API, *Consumer Information*, available at http://www.api.org/oil-and-natural-gas/consumer-information.

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early knowledge on global warming risks and impacts, and following a decades-long campaign of misleading statements on global warming that primed the pump for massive use of their fossil fuel products:

a) Exxon's "Lights Across America" website advertisement states that natural gas is "helping dramatically reduce America's emissions"[216] even though natural gas is a fossil fuel causing widespread planetary warming and harm to coastal entities like King County and the use of natural gas competes with wind and solar, which have no greenhouse gas emissions.

b) In 2017, Shell's CEO promoted massive fossil fuel use by stating that the fossil fuel industry could play a "crucial role" in lifting people out of poverty.[217] A Shell website promotion states: "We are helping to meet the world's growing energy demand while limiting CO_2 emissions, by delivering more cleaner-burning natural gas."[218]

c) BP touts natural gas on its website as "a vital lower carbon energy source" and as playing a "crucial role" in a transition to a lower carbon future.[219] BP promotes continued massive fossil fuel use as enabling two billion people to be lifted out of poverty.[220]

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[216] https://www.youtube.com/watch?v=tMu1CBjXfq4 (at 0:46).

[217] Shell, *Deliver Today, Prepare for Tomorrow* (Mar. 9, 2017), available at http://www.shell.com/media/speeches-and-articles/2017/deliver-today-prepare-for-tomorrow.html (speech delivered by Shell CEO).

[218] Shell United States, *Transforming Natural Gas*, formerly available at http://www.shell.us/energy-and-innovation/transforming-natural-gas.html (last visited May 8, 2018), now available at https://web.archive.org/web/20171124090704/http://www.shell.us/energy-and-innovation/transforming-natural-gas.html.

[219] BP, *Sustainability Report 2016* (Apr. 6, 2017), https://www.bp.com/content/dam/bp/en/corporate/pdf/sustainability-report/group-reports/bp-sustainability-report-2016.pdf; BP, *Shifting Towards Gas*, formerly available at http://www.bp.com/energytransition/shifting-towards-gas.html (last visited Jan. 8, 2018), now available at https://web.archive.org/web/20180224153207/http://www.bp.com/energytransition/shifting-towards-gas.html.

[220] BP, *BP energy outlook*, available at http://www.bp.com/en/global/corporate/energy-economics/energy-outlook.html (last visited May 8, 2018).

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d) Chevron's website implores the public that "we produce safe, reliable energy products for people around the world."[221] Chevron also promotes massive use of fossil fuels as the key to lifting people out of poverty: "Reliable and affordable energy is necessary for improving standards of living, expanding the middle class and lifting people out of poverty. Oil and natural gas will continue to fulfill a significant portion of global energy demand for decades to come—even in a carbon-constrained scenario."[222] A prior Chevron advertisement still available on the web promotes Chevron fossil fuels on a massive scale by stating that "our lives demand oil."[223]

e) ConocoPhillips promotes its fossil fuel products by stating that it "responsibly suppl[ies] the energy that powers modern life."[224] Similarly, ConocoPhillips has the following advertising slogan on its website: "Providing energy to improve quality of life."[225]

170. Contrary to Defendants' claims that the use of massive amounts of fossil fuels is required to lift people out of poverty, the IPCC has concluded: "Climate change will exacerbate multidimensional poverty in most developing countries . . . . [and] will also create new poverty pockets in countries with increasing inequality, in both developed and developing countries."[226]

171. Defendants BP and Exxon have also used long-term energy forecasts and similar reports to promote their products under the guise of expert, objective analysis. These forecasts

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[221] Chevron, *Products and Services*, available at https://www.chevron.com/operations/products-services (last visited May 8, 2018).

[222] Chevron, *Managing Climate Change Risks*, available at https://www.chevron.com/corporate-responsibility/climate-change/managing-climate-risk (last visited May 8, 2018).

[223] Chevron TV ad, *supra* note 199.

[224] ConocoPhillips, *The Changing Energy Landscape*, formerly available at http://www.conocophillips.com/who-we-are/our-company/spirit-values/responsibility/Pages/the-changing-energy-landscape.aspx, now available at https://web.archive.org/web/20130730132307/http://www.conocophillips.com/who-we-are/our-company/spirit-values/responsibility/Pages/the-changing-energy-landscape.aspx.

[225] ConocoPhillips, *Producing Energy*, formerly available at http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx (last visited May 8, 2018).

[226] Climate Change 2014, *supra* note 214, at 797.

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have repeatedly sought to justify heavy reliance on fossil fuels by overstating the cost of renewable energy.

172. Defendants' energy forecasts are aimed in substantial part at consumers and are promoted to the public through their respective websites and other direct media. Exxon continues to promote its annual "Outlook for Energy" reports in videos currently available on the Internet. But Exxon's energy "analyses" are self-serving means of promoting fossil fuels and undercutting non-dangerous renewable energy and clean technologies. For example, Exxon has claimed in a recent forecast that natural gas is a cheaper way to reduce carbon dioxide emissions than wind or solar power while BP has claimed that solar and wind power will be more expensive in 2050 than natural gas or coal even though wind and solar are already cheaper than natural gas or coal in some circumstances.[227] Exxon and BP also have understated in recent "forecasts" the expected market share of electric vehicles even as electric vehicle technology has taken off, prices have dropped, and GM announced (in 2015) that it was investing billions in electric cars because the "future is electric."[228]

173. Defendants' reports also promote their fossil fuel products by warning consumers of supposed downsides to reducing fossil fuel use and carbon dioxide emissions. For example, Exxon's most recent report claims that the costs of carbon dioxide reductions are "ultimately borne by consumers and taxpayers."

174. These reports by BP and Exxon, and a similar one by Shell, predict massive increases in fossil fuel use over roughly the next 15 years.[229] This is part of a larger strategy of

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[227] Exxon, *2017 Outlook for Energy: A View to 2040* at 31, available at http://cdn.exxonmobil.com/~/media/global/files/outlook-for-energy/2017/2017-outlook-for-energy.pdf; BP, *BP Technology Outlook* at 18 (Nov. 2015), available at http://www.bp.com/content/dam/bp/pdf/technology/bp-technology-outlook.pdf.

[228] Exxon, *2017 Outlook for Energy*, *supra* note 227, at 18; BP, *BP Technology Outlook*, *supra* note 227, at 47; General Motors, Press Release, *GM Employees on Mission to Transform Transportation* (May 7, 2015), available at http://media.gm.com/media/us/en/gm/company_info/facilities/assembly/orion.detail.html/content/Pages/news/us/en/2015/may/0507-sustainability-report.html.

[229] Shell, *New Lens Scenarios* (Mar. 2013), available at https://www.shell.com/content/dam/royaldutchshell/documents/corporate/scenarios-newdoc.pdf.

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"mak[ing] the case for the necessary role of fossil fuels," as BP's chief executive stated in a moment of candor in 2015.[230]

175. Yet this "case for the necessary role" is a recipe for disaster—as one of the Defendants has now finally admitted. On November 28, 2017, Shell finally acknowledged the importance of "keeping the rise in global temperatures below 2 degrees C," and also acknowledged that this "means that, *over time*, we as society must stop adding to the stock of greenhouse gases in the atmosphere," *i.e.*, a phase down of fossil fuels to net zero emissions. But, critically, Shell did not say when this should occur. While Shell also announced on the same day that it would be reducing the carbon footprint of its energy products by "around" half by 2050, Shell in fact was merely agreeing to reduce the carbon "intensity" of its mix of energy products (*i.e.*, the carbon emissions per unit of energy). The Shell parent expressly took responsibility for greenhouse gas emissions from the combustion of Shell's fossil fuel products by consumers because Shell's carbon reduction goal involves "not just emissions from its own operations but also those produced when using Shell products." Shell's CEO stated that Shell would seek to reduce the carbon footprint of its products "by reducing the net carbon footprint of the full range of Shell emissions, from our operations and from the consumption of our products." Shell has said nothing to alter the fact that its total fossil fuel production and sales, and hence the total GHG pollution from its products, may well, and likely will, go up in absolute terms. Shell's announcement is too little and too late to avert the climate change impacts that already are occurring, and that will inevitably grow worse over the coming decades based in substantial part upon Shell and other Defendants' past and continuing conduct and future business plans.

176. On December 11, 2017, Exxon filed a notice with the U.S. Securities & Exchange Commission that it "has decided to further enhance the Company's disclosures" consistent with a

[230] BP, *2015 Annual General Meeting: group chief executive* (Apr. 16, 2015), available at http://www.bp.com/en/global/corporate/media/speeches/2015-annual-general-meeting-group-chief-executive.html.

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2017 shareholder proposal requesting that Exxon more fully disclose the impacts of climate change policies on its business, and stated that it "will seek to issue" disclosures on "energy demand sensitivities, implications of two degree Celsius scenarios, and positioning for a lower-carbon future" in the "near future."[231] Shareholders have been calling on Exxon to make further detailed disclosures on how climate change will impact its business for years. Exxon's brief announcement—which says nothing about reducing oil and gas production—will do nothing to avert climate change impacts that already are occurring, and that will inevitably grow more severe based upon Exxon and other Defendants' past and continuing conduct and future business plans.

VIII. KING COUNTY WILL INCUR SEVERE CLIMATE CHANGE INJURIES THAT WILL REQUIRE HUNDREDS OF MILLIONS IN EXPENDITURES TO ABATE THE GLOBAL WARMING NUISANCE

177. "Puget Sound is experiencing a suite of long-term changes that are consistent with those observed globally as a result of human-caused climate change."[232] These include increasing air temperatures, a longer frost-free season, decreasing snow and ice cover, increasing sea level, and a possible increase in the intensity of heavy rainfall events.[233] The lowland areas surrounding Puget Sound warmed about +1.3°F (range: +0.7°F to +1.9°F) between 1895 and

[231] Exxon, Form 8-K (Dec. 11, 2017), available at https://www.sec.gov/Archives/edgar/data/34088/000003408817000057/r8k121117.htm (Regulation FD Disclosure to the U.S. Secs. & Exch. Comm'n).

[232] Mauger, G.S., et al. State of Knowledge: Climate Change in Puget Sound. Report prepared for the Puget Sound Partnership and the National Oceanic and Atmospheric Administration. Climate Impacts Group, University of Washington, Seattle. doi:10.7915/CIG93777 ("State of Knowledge") at 2-1, available at http://cses.washington.edu/picea/mauger/ps-sok/PS-SoK_2015.pdf. (hereinafter "State of Knowledge").

[233] The range shows the 95% confidence limits for the trend estimate. *Id.*

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2014, with statistically significant warming occurring in all seasons except for spring.[234]," [235] All but six of the years from 1980 to 2014 were warmer than the 20th century average.[236] This trend is consistent with the observed warming over the Pacific Northwest as a whole as a result of a rising greenhouse gas emissions.[237]

178. "The Puget Sound region is projected to warm rapidly during the 21st century as a result of rising greenhouse gas emissions."[238] Prior to mid-century, the projected increase in air temperatures is about the same for all greenhouse gas scenarios, a result of the fact that a certain amount of warming is already "locked in" due to past emissions. After about 2050, projected warming depends on the amount of greenhouse gases emitted globally in the coming decades.

179. "All scenarios project warming. Warming is projected to continue throughout the 21st century . . . . For the 2050s (2040–2069, relative to 1970–1999), annual average air temperature is projected to rise +4.2°F to +5.5°F, on average, for a low (RCP 4.5) and a high

[234] The range shows the 95% confidence limits for the trend estimate. *Id.* These trends as reported in State of Knowledge were determined using data from the U.S. Climate Divisional Dataset, developed by the National Centers for Environmental Information, which provides long-term climate summaries for each of the country's 344 climate divisions. Results for the "Puget Sound Lowlands" climate division were used in the present analysis, which includes all of the low-lying land areas surrounding Puget Sound, where most of the historical weather observations are concentrated. For more information, see: http://www.ncdc.noaa.gov/monitoring-references/maps/us-climate-divisions.php.

[235] State of Knowledge, *supra* note 232, at 2-2 (citing Vose, R. S. et al., 2014. Improved historical temperature and precipitation time series for US climate divisions. *Journal of Applied Meteorology and Climatology*, 53(5), 1232–1251).

[236] *Id.* at ES-2.

[237] Mote, P. W. et al., 2013. Climate: Variability and Change in the Past and the Future. Chapter 2, 25–40, in M.M. Dalton, P.W. Mote, and A.K. Snover (eds.) *Climate Change in the Northwest: Implications for Our Landscapes, Waters, and Communities*, Washington D.C.: Island Press; John T. Abatzoglou, et al., *Seasonal climate variability and change in the Pacific Northwest of the United States*, 27 J. OF CLIMATE 2125–2142 (Mar. 2014).

[238] State of Knowledge, *supra* note 232, at 2-5.

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(RCP 8.5) greenhouse gas scenario.[239],[240] This understates the human-driven/fossil fuel warming impact because the baseline period itself (*i.e.*, 1970 to 1999) includes a period of significant human-induced warming. Much higher warming is possible after mid-century.[241] More extreme heat events are also expected. By 2100, the projected rise in temperatures for the Puget Sound region is at least double that experienced in the 20th century, and could be nearly ten times as large.[242]

180. Climate change in the Pacific Northwest including King County is projected to cause more severe heat events, summer droughts, decreased water supplies for people and fish, and changes in habitat and species distribution.

181. Climate change impacts on King County will also be affected by changes in Washington State and the Pacific Northwest. Average annual air temperature across the Pacific Northwest is projected to increase +4.3°F to +5.8°F, on average, for a low (RCP 4.5) and a high (RCP 8.5) greenhouse gas scenario by the 2050s (2040–2069, relative to 1950–1999).[243] This understates the human-driven/fossil fuel warming impact because the baseline period itself (*i.e.* 1950 to 1999) includes a period of significant human-induced warming. By mid-century, the Pacific Northwest is likely to regularly experience average annual temperatures that exceed the

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[239] Greenhouse gas scenarios as reported in State of Knowledge generally range from a low (RCP 4.5) to a high (RCP 8.5) greenhouse gas scenario (both of which are used in the recent IPCC report). The implications of the lowest greenhouse gas scenario—RCP 2.6, which assumes aggressive reductions in emissions—are not discussed in the text of the State of Knowledge report because there are no published projections specific to the Puget Sound region that are based on this scenario.

[240] State of Knowledge, *supra* note 232, at 2-5 ("Projections [in State of Knowledge] stem from 10 global climate model projections, based on both a low (RCP 4.5) and a high (RCP 8.5) greenhouse gas scenario. The 10 global climate models were selected for their ability to accurately represent the climate of the Pacific Northwest.").

[241] *Id.* (citing Mote, P. W. et al., 2015. Integrated Scenarios for the Future Northwest Environment. Version 2.0. USGS ScienceBase. Data set accessed 2015-03-02 at https://www.sciencebase.gov/catalog/item/5006eb9de4b0abf7ce733f5c).

[242] *Id.* at ES-2.

[243] Snover, A.K., et al. 2013. Climate Change Impacts and Adaptation in Washington State: Technical Summaries for Decision Makers. State of Knowledge Report prepared for the Washington State Department of Ecology. Climate Impacts Group, University of Washington, Seattle.

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warmest year observed in the 20th century.[244] The Pacific Northwest and Washington State are also expected to experience more frequent and more intense summer heat events and less frequent and less intense winter cold spells. These increased temperatures are projected to contribute to:

- Decreasing winter snowpack and changes in the timing and volume of streamflows fed by snowmelt;
- Higher summer water demand, especially during more intense and longer summer droughts;
- An increased risk of flooding;
- An increased risk of fire in forest lands and open space;
- A higher risk for heat-related mortality during more intense summer heat waves;
- More summer air pollution and related health impacts;
- Declining summer hydropower production and higher summer energy demand, especially from air conditioning;
- Warmer water temperatures in streams, rivers, lakes, and Puget Sound; and
- Shifts in habitat, invasive species, and insects affecting forest health; agriculture; ecosystem function; and Tribal treaty rights and cultural identity.[245]

182. In addition to rising temperatures, changes in seasonal and extreme precipitation are expected and must be planned for. Most models project increasing winter precipitation and decreasing summer precipitation in the Puget Sound region.[246] For example, relative to 1970-99, winter precipitation in the Puget Sound region is projected to be +9.9 to +11% higher, on average, for a low (RCP 4.5) and high (RCP 8.5) greenhouse gas scenario.[247] This understates the human-driven/fossil fuel warming impact because the baseline period itself (*i.e.*, 1970 to 1999) includes a period of significant human-induced warming. More of this precipitation will fall as rain rather than snow in the Cascade Mountains. Heavy rain events are also expected to

[244] State of Knowledge, *supra* note 232, at 2-7.

[245] Climate Change in the Northwest, *supra* note 237.

[246] State of Knowledge, *supra* note 232, at 3-4; 5-1.

[247] *Id.* at C-14.

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become more frequent and intense.[248] These changes will affect the timing and volume of seasonal streamflow and flooding, particularly in mixed rain-and-snow watersheds like the Green, Snoqualmie, and Cedar River watersheds. Expected impacts include:

- Ongoing decreases in snowpack and glaciers, a key source of water for large urban areas and many other communities in the Puget Sound region;
- Higher winter streamflows, which increase the risk of winter flooding and streambank erosion;
- An increased risk of landslides;
- Increased challenges managing the potential for, and consequences of, increased river flooding, stormwater runoff, and urban flooding;
- Changes in water quality (e.g., temperature, sediment loads, pollutant loading) that can affect human health and aquatic species; and
- Lower and warmer summer streamflows.

183. Efforts to address hydrologic impacts are increasing, particularly in the areas of flood risk reduction, stormwater management, water supply planning, hydropower production, and salmon recovery.

184. Sea level is rising and is expected to accelerate due to the global-scale effects of thermal expansion, ice melt from Greenland and Antarctica, and other factors sensitive to rising temperatures. Accelerating sea level rise will cause increasingly severe harm to King County.

185. Global mean sea level (GMSL) has risen by 7 to 8 inches since 1900, with about 3 of those inches occurring since 1993. Human-caused climate change has made a substantial contribution to GMSL rise since 1900, contributing to a rate of rise that is likely greater than during any preceding century in at least 2,800 years.[249] In addition to the tide gauge measurements, satellites also have taken measurements of sea level since late 1992. Because sea

[248] Warner, M.D., et al., *Changes in winter atmospheric rivers along the North American west coast in CMIP5 climate models*. 16 JOURNAL OF HYDROMETEOROLOGY 118-128 (2015).

[249] Sweet, W.V., et al., 2017: Sea level rise. In: Climate Science Special Report: Fourth National Climate Assessment, Volume I [Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, pp. 333-363, doi: 10.7930/J0VM49F2; https://science2017.globalchange.gov/chapter/12/.

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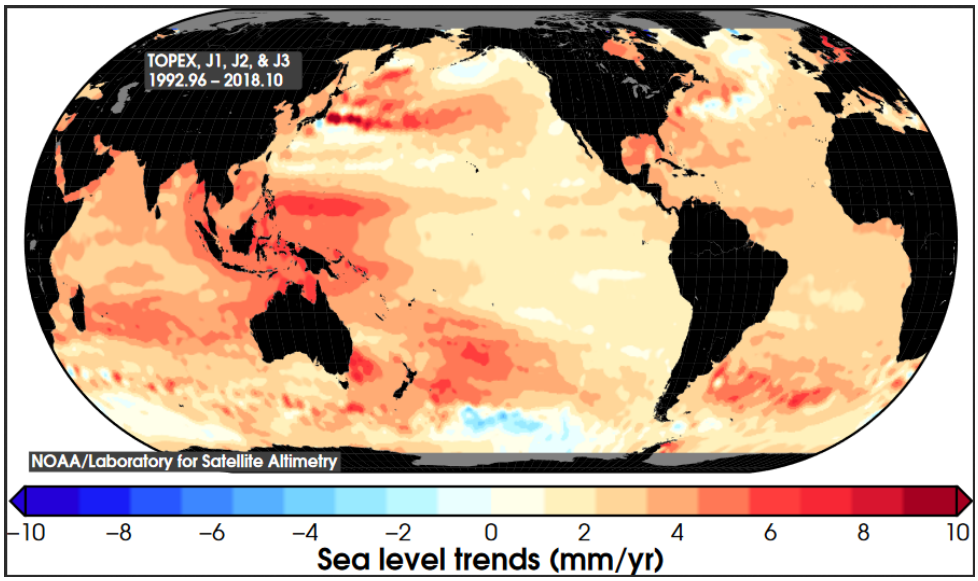
level is a long-term phenomenon, it takes approximately 25 years to establish a sea level rise trend from a dataset such as those in the satellite measurements. Thus, temporary phenomena such as El Niño and La Niña events can, over a shorter period of time, mask the true long-term effect of climate change on sea level and be misleading, as the IPCC pointed out in its 2012 assessment report.[250] This is precisely what occurred in the eastern Pacific ocean due to a period of La Niña events during three of the four winters from 2008-2013, which biased the results of the relatively short span of satellite data that was available in 2013 when the IPCC published its most recent assessment report and made it appear that sea level was falling in this area. However, the *complete* satellite data from 1993 to *present* demonstrate that the eastern Pacific ocean is experiencing sea level rise as depicted below in the global map from the U.S. National Oceanic and Atmospheric Administration:



Global sea level rise map from satellite measurements from late 1992 to present.[251]

186. Analysis of the *full* 25-year satellite record published in February, 2018 demonstrates that the rate of sea level rise is accelerating, primarily from the melting of the large ice sheets in Greenland and Antarctica, and therefore that previous projections of future sea level

[250] Intergovernmental Panel on Climate Change, CLIMATE CHANGE: THE IPCC SCIENTIFIC ASSESSMENT, *supra* note 136, at 1148–49, available at https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter13_FINAL.pdf.

[251] https://www.star.nesdis.noaa.gov/sod/lsa/SeaLevelRise/slr/map_txj1j2_blue2red.pdf.

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that had assumed a constant rate of sea level rise were too low. This acceleration means that future coastal impacts from sea level rise will be more severe than previously projected.[252]

187. In Seattle, sea level has risen about nine inches since 1899.[253] By 2100, relative sea level in the Seattle area of Puget Sound is projected to rise by 2.3 feet (50% probability) up to 8.6 feet under a high emissions scenario, compared to a baseline period of 1991 to 2009.[254] This understates the human-driven/fossil fuel warming impact because the baseline period itself (*i.e.* 1991 to 2009) includes a period of significant human-induced warming. Ocean acidity is projected to increase by about 150 percent by 2100 under a high (A2) emissions scenario, relative to pre-industrial levels.[255] These changes in Puget Sound are projected to contribute to:

- Permanent inundation of low-lying areas;
- Increased coastal flooding during King Tides, daily high tides, and storm surges;
- Higher wave energy and increased exposure to waves;
- Increased shoreline erosion, bluff erosion, and coastal bluff landslides;
- Increased saltwater and/or groundwater intrusion (due to a higher groundwater table);
- Increased coastal "squeeze" in locations where nearshore habitat is not able to move inland as sea level rises; and
- Changes to the Puget Sound food web, including potential impacts to both wild and commercially-grown shellfish.[256]

188. Projected climate impacts in King County have widespread implications for people, infrastructure, and ecosystems in the Puget Sound region and have direct and indirect economic impacts on King County.

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[252] R.S. Nerem, et al., *Climate-Change-Driven Accelerated Sea Level Rise Detected in the Altimeter Era*, 115 Proceedings of the National Academy of Sciences 2022 (Feb. 27, 2018), http://www.pnas.org/content/115/9/2022; *see also* https://www.sciencedaily.com/releases/2018/02/180212150739.htm.

[253] https://tidesandcurrents.noaa.gov/sltrends/sltrends_station.shtml?id=9447130.

[254] 2018 Sea Level Rise Assessment, *supra* note 149, at 19 and accompanying worksheets available at http://www.wacoastalnetwork.com/wcrp-documents.html.

[255] Feely, R.A., Doney, S.C. and Cooley, S.R., *Ocean acidification: Present conditions and future changes in a high-CO_2 world*, 22 OCEANOGRAPHY 36-47 (2009).

[256] 2015 SCAP, *supra* note 2, at 100.

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189. **Impacts on water supply and salmon**. Decreasing snowpack and changes in precipitation create additional uncertainty for regional and local water supplies (impacts vary by supplier) and will require a sustained effort to understand and prepare for the impacts of climate change.[257] Hydrologic impacts will also affect availability of water for irrigation, hydropower production, and habitat needs. Hydrologic changes will affect salmon across life stages, increasing the urgency and scale of habitat restoration and riparian shading needed to recover salmon that are relied upon by Treaty Tribes and commercial fishers. Additional investment will be needed to help address the growing challenges for summer water supply, particularly as it relates to the needs for salmon recovery and irrigation.

190. **Impacts on King County Assets and Infrastructure**. Climate change will require retrofitting and/or replacing many King County-owned assets and infrastructure to protect the County and its residents from increased flooding, sea level rise, stormwater, and other severe impacts. Higher costs for maintenance, operations, and emergency repairs are also expected. Additional study will be needed in many cases to determine how to most effectively prepare County assets for climate change. For example:

- Drainage and stormwater infrastructure. Current pipes, culverts, ditches, and other drainage conveyances located within King County Roads right-of-ways and other locations will not sufficiently accommodate the projected greater quantities of water caused by climate change. The projected greater quantities of water will likely result in more road failures, washouts, and road closures throughout the King County road network.
- Bridges. Many of King County's bridges are older and likely to experience more frequent closures due to higher flood water elevations exceeding the height of these bridges. Higher river flows also increase the potential for scour, erosion, and depositional processes around bridge abutments. Working together, these processes weaken the structural integrity of a bridge. As a result, climate change will result in more frequent bridge closures, repairs and potentially replacements.

[257] Water Supply Forum, *Regional Water Supply Resiliency Project: Climate Change Resiliency Assessment Technical Memorandum* (2016), available at: https://www.watersupplyforum.org/docs/102/cd8d53786c6d6fa0d0367520126295576b92515f/WSFregionalwatersupplyresiliencyprojectclimatechangeApril2016FINAL.pdf; Seattle Office of Sustainability and Environment, *Carbon Neutral Climate Ready: Preparing for Climate Change* (2017), available at https://www.seattle.gov/Documents/Departments/Environment/ClimateChange/SEAClimatePreparedness_August2017.pdf.

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- Roads. Portions of King County's road network are vulnerable to landslides, slope failures, coastal flooding, and chronic riverine flooding as a function of heavy rain events and King Tides, creating delays for motorists, stranding properties cut off by flood waters or slides, and damaging road infrastructure. The current frequency and geographic extent of road closures due to flooding and slides will likely increase with the projected more intense heavy rain events, river flooding, and sea level rise. More damage, more extensive or permanent road closures and detours, and an increased need for capital investments are likely.
- Waste Treatment and Conveyance. Sea level rise is expected to increase the potential for flooding and saltwater intrusion at several low-lying wastewater conveyance facilities, damaging infrastructure and increasing costs for operations and maintenance.[258] Additionally, given the increasing frequency of high flow storm events, there is greater urgency to make investments at the West Point Treatment Plant, located on the shoreline of Puget Sound, to add more redundancy for higher and longer lasting peak flows.

191. **Impacts on Public Health**. Climate change impacts on King County residents' health include projected: higher demands on emergency medical services with more heat-related illness and mortality;[259] increased respiratory and cardiovascular disease due to projected increases in wildfire smoke, ground-level ozone, and allergens; an increased risk of illness associated with changes in freshwater and marine toxins and pathogens; an increased risk of illness associated with the anticipated spread of vector-borne diseases carried by mosquitoes, rodents, and ticks; and, increased mental health stress and risk of injury or death associated with more extreme climate or weather-related events.[260] These impacts will exacerbate pre-existing

[258] King County Waste Treatment Division, *Vulnerability of Major Wastewater Facilities to Flooding From Sea-Level Rise* (2008), available at: https://your.kingcounty.gov/dnrp/library/archive-documents/wtd/csi/csi-docs/0807_SLR_VF_TM.pdf; King County Waste Treatment Division, *Saltwater Intrusion and Infiltration into the King County Wastewater System* (2011), available at https://your.kingcounty.gov/dnrp/library/wastewater/cso/docs/2011-03_SaltwaterIntrusionAndInfiltrationStudy.pdf; King County Waste Treatment Division, *Hydraulic Analysis of Effects of Sea-Level Rise on King County's Wastewater System* (2012), available at: https://your.kingcounty.gov/dnrp/library/wastewater/cso/docs/2012-11_HydraulicAnalysis_PhaseI_Task2_FINAL.pdf.

[259] Calkins, M.M., et al., *Impacts of extreme heat on emergency medical service calls in King County, Washington, 2007-2012: relative risk and time series analyses of basic and advanced life support*, ENVIRONMENTAL HEALTH 15:13 (Jan. 28, 2016). doi: 10.1186/s12940-016-0109-0.

[260] Isaksen, T., et al., *Increased hospital admissions associated with extreme-heat*, REVIEWS ON ENVIRONMENTAL HEALTH, 30(1):51-64 (2015). doi: 10.1515/reveh-2014-0050; Jackson, J.E., et al., *Public health impacts of climate change in Washington State: projected mortality risks due to heat events and air pollution*, 102 CLIMATIC CHANGE 159-186 (2010), doi: 10.1007/s10584-010-9852-3; Moore, S.K., et al. 2008. *Impacts of climate variability and future climate change*

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inequities in health, housing, employment, and income and are expected to have disproportionate effects on children, older adults, outdoor workers, communities of color, low-income households, people who are socially or linguistically isolated, pregnant women, and people with chronic medical conditions. For example, increased mortality from extreme heat events has already been documented for very young persons, older adults, and those with existing health conditions like diabetes and respiratory disease.[261] Additionally, lower cost and substandard quality housing is more likely to be co-located in proximity to significant industrial and transportation pollution sources and in areas more prone to flood hazard risks, exacerbating health impacts. Lower income populations are also less likely to have the resources needed to mitigate impacts through actions like flood proofing, home insulation, installing air conditioning, or easily accessing a shady park or air-conditioned public space.[262]

192. Climate change will require significant investments in Public Health services to meet these growing demands. Necessary actions will include expanding or developing surveillance systems for climate-related health impacts to provide timely information for Public Health action, such as health impacts associated with pollution, wildfire smoke, heat impacts and infectious disease (e.g., foodborne, waterborne, vector-borne); investing in emergency preparedness and response capabilities for event-based climate change health risks (e.g., flooding, mud slides, wildfires, heat events); increasing support for community health clinics and medical support services provided by the County; and expanding outreach and partnership efforts to help King County residents and organizations understand, prepare for, and adapt to the risks of climate change on public health.

on harmful algal blooms and human health. 7 ENVIRONMENTAL HEALTH S4 (2008), doi:10.1186/1476-069X-7-S2-S4.

[261] Isaksen, *supra* note 260; Isaksen, T., et al., *Increased mortality associated with extreme-heat exposure in King County, Washington, 1980-2010*, INTERNATIONAL JOURNAL OF BIOMETEOROLOGY (2015), doi:10.1007/s00484-015-1007-9.

[262] 2015 SCAP, *supra* note 2, at 101.

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193. **Impacts on King County Risk Management**. Nationally, more frequent and severe storms and flood disasters are leading businesses and insurers to take steps to mitigate risks, triggering changes in insurance costs and availability.[263] Many insurance carriers are now aggressively pushing for substantial rate increases, especially for clients with catastrophe (CAT) exposure. Property insurers are carefully reviewing their CAT accumulations in their portfolios and may cut capacity and/or substantially increase rates to help offset the impact of these losses. It is estimated that King County will incur a 10% rate increase (or approximately $450,000 in additional premium based off 2017 property values) during its 2018-19 policy term due to extreme weather-related disasters in the United States in 2017. King County is exploring alternative risk financing techniques, including parametric products, to minimize the long-term financial impact of the hardening insurance market on CAT driven perils, and the impact of global warming on the traditional insurance marketplace. These alternative risk financing techniques may increase costs to the County. Other strategies such as safeguarding properties through loss control measures or incorporating risk mitigation into site selection and new construction will also need to be pursued.

194. King County must adapt now to the ongoing impacts of climate change to abate ongoing damage to property, facilities, and equipment, with risks of increasingly severe damage in the future. In particular, King County must improve, protect, move, and build infrastructure to adapt now to past and ongoing sea level rise.

195. King County is already experiencing, and working to abate, current harms caused by climate change. King County's commitment to confronting climate change is documented in the County's Strategic Climate Action Plan (first drafted in 2007, and updated in 2012 and 2015),[264] which identifies actions needed to reduce greenhouse gas emissions and reduce climate risks to County operations, infrastructure, and residents. The 2015 Strategic Climate Action Plan update included an assessment of current projected climate impacts on critical public

[263] *Id.*

[264] *Id.*

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infrastructure and services owned or managed by King County and recommended near-term priority actions to address them. King County has committed to do its part, including through a shared regional goal adopted by the Growth Management Planning Council, to reduce its greenhouse gas emissions 25% by 2020, 50% by 2030, and 80% by 2050 compared to a 2007 baseline, and consistent with what climate science says needs to be done in order to avoid the worst impacts of climate change. King County's Comprehensive Plan recognizes that "[c]limate change impacts are here and now," and highlights as a key principle the County's preparations for the effects of climate change. It provides that "King County must be proactive in preparing for local climate change impacts," by, for example, "preparing for more frequent and severe flooding and droughts, developing recycled water sources, working with farm and forest owners to address climate change impacts, planning for effects of climate change on human health, taking steps to improve the resiliency of the natural and built environments, and ensuring that the County can continue to provide services such as transit, wastewater treatment, and flood protection." The Plan requires that King County "integrate estimates of the magnitude and timing of climate change impacts into capital project planning, siting, design, and construction and also implement infrastructure operation and maintenance programs that consider full life-cycle costs and climate change impacts in asset management." In June 2018, King County issued a biennial report detailing its substantial progress on implementing and accomplishing the goals and action items included within the Strategic Climate Action Plan. It reported that "King County is actively working to reduce climate change impacts on County operations and core functions," including "protecting public health and safety, providing critical infrastructure, supporting economic prosperity, and protecting natural and treaty trust resources." The report stated that a "changing climate is affecting our region" and the "choices we make today about reducing greenhouse gases and climate preparedness will affect the severity of future impacts."

196. Since 2008, King County has also described projected climate impacts and adopted formal policies directing programmatic actions and investments to reduce greenhouse gas emissions and prepare for climate impacts as part of the King County Comprehensive Plan. The Comprehensive Plan is the long-range guiding policy document for all land use and

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development regulations in unincorporated King County, and for regional services throughout the County including transit, sewers, parks, trails and open space. The 2008 Comprehensive Plan[265] included recommendations for evaluation and consideration of the potential impacts of climate change, such as coastal flooding associated with sea level rise, more severe winter flooding, disaster preparedness updates, levee investment, and land use plans, as well as development regulations. Subsequent Comprehensive Plan updates in 2012[266] and 2016[267] further detailed climate impacts and directed action and programmatic investment in climate preparedness.

197. As directed by the Strategic Climate Action Plan and King County Comprehensive Plan, the County has invested extensively in studies related to sea level rise, extreme precipitation, and flooding to better understand how climate change affects King County infrastructure and operations.[268] For example, a 2008 study evaluating the effects of sea level rise on King County's Wastewater Treatment Division facilities recommended that sea level rise should be incorporated in planning for major asset rehabilitation or conveyance planning that involves the facilities included in the analysis. Since the release of the report, King County has modified the conveyance system and outfalls of the Wastewater Treatment Division facilities to reduce or eliminate seawater intrusions, even during high tide. Additional preparations for limiting saltwater intrusion include installing flap gates, raising weirs, and other similar controls. King County is also undertaking flood levee improvements and engaging in other flood-risk reduction activities, and has strengthened "freeboard" requirements for finished floor elevations

[265] King County Comprehensive Plan at 4-16 (Oct. 2008), available at https://www.kingcounty.gov/~/media/depts/permitting-environmental-review/dper/documents/growth-management/comprehensive-plan-2008/Chap4_Environment_adopted08.ashx?la=en.

[266] https://www.kingcounty.gov/depts/executive/performance-strategy-budget/regional-planning/king-county-comprehensive-plan/2012Adopted.aspx.

[267] https://www.kingcounty.gov/depts/executive/performance-strategy-budget/regional-planning/king-county-comprehensive-plan/2016Adopted.aspx.

[268] See *supra* notes 265–267; Jim Simmonds, *Modeling Climate Change Impacts on Extreme Precipitation, Stormwater Design Requirements, and Wastewater Conveyance* (Oct. 19, 2017), available at https://kingcountydownstream.org/2017/10/19/modeling-climate-change-impacts-on-extreme-precipitation-stormwater-design-requirements-and-wastewater-conveyance/.

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beyond federal minimum requirements to provide an extra factor of safety in the face of climate risks.

198. While actions are being taken to protect King County and its residents from the impacts of climate change, the scope, scale, and cost of investment must increase over time to address the magnitude of projected impacts and associated risks tied to rising greenhouse gas emissions. Pervasive fossil fuel combustion and greenhouse gas emissions to date will cause ongoing and future harms regardless of future fossil fuel combustion or future greenhouse gas emissions. Future production and use of fossil fuels will accelerate the rate of temperature change and sea level rise, requiring even greater expenditures to abate the injuries. King County must plan for and adapt to future harms related to climate change now to ensure that abatement of ongoing and future harms is done most efficiently and effectively and in order to protect human well-being and public and private property before it is too late. Additionally, the significant infrastructure needed to abate global warming requires long lead times for planning, financing, and implementation.

199. Sea level rise, storm surges, and flooding caused by global warming threaten not only the physical infrastructure and property of King County and its citizens, but also the safety, lives, daily way of life, sense of community, and security of King County residents. The risk of harm to King County and its citizens will increase, just as rising sea levels and other climate change impacts will continue due to past and current greenhouse gas emissions.

200. Defendants relied upon their knowledge about climate change science to protect their own business assets from expected rising seas and melting permafrost by incorporating climate change science into their engineering standards for construction of their pipelines, offshore oil platforms, and other projects, the same thing that the County now must do. Exxon has stated that since its operations may be disrupted by "severe weather events" and "natural disasters," to protect business assets such as its offshore production facilities, coastal refining operations, and petrochemical plants in vulnerable areas, its designs should account for the

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"engineering uncertainties that climate change and other events may potentially introduce."[269] Chevron also takes into account potential risks to its operations and assets, including "storm severity and frequency" and "sea level rise" to "plan for their resiliency."[270] Likewise, ConocoPhillips has warned that it could incur increased expenses for its assets and operations if there are "significant changes in the Earth's climate, such as more severe or frequent weather conditions."[271] Defendants thus recognize that protecting infrastructure and operations from climate change is necessary and entails additional planning and costs than would otherwise be required. In the same way, the County seeks to be able to more fully protect itself from climate change impacts to which Defendants have substantially contributed.

IX. DEFENDANTS' CONDUCT IS ONGOING, AND IS CAUSING CONTINUOUS AND RECURRING INJURIES TO THE COUNTY

201. Defendants' conduct is causing a continuous encroachment upon and interference with the County's property. For example, areas of the County that were once above the mean high tide line now experience regular tidal inundation. This sea level rise will inevitably grow worse, regularly inundating additional County-owned property, and eventually portions of coastal areas owned by the County may be continuously submerged.

202. Defendants' conduct is also causing recurring harms to the County. These harms include encroachments upon and interferences with the County's property from higher storm surges and more intense heavy rain events, as well as injuries to public health resulting from more frequent and more intense heat waves and flooding. These recurring harms will also grow worse and more frequent in the future.

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[269] Exxon Mobil Corporation, 2016 Form 10-K at 4 (Feb. 21, 2017), available at https://www.sec.gov/Archives/edgar/data/34088/000003408817000017/xom10k2016.htm.

[270] Chevron Corporation, 2016 Form 10-K at 20 (Feb. 23, 2017), available at https://www.sec.gov/Archives/edgar/data/93410/000009341017000013/cvx-123116x10kdoc.htm.

[271] ConocoPhillips, 2016 Form10-K at 25 (Feb. 21, 2017), available at https://www.sec.gov/Archives/edgar/data/1163165/000119312517050077/d264316d10k.htm.

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203. Defendants' conduct that has caused and is causing these harms to County property and public health has also been continuous and ongoing. As described above, Defendants continue to produce, market, distribute, and sell fossil fuels in massive quantities; to promote fossil fuel consumption in these massive quantities; and to downplay the threat posed by climate change. This ongoing conduct will cause increasingly severe injuries to the County, including new and more significant continuous encroachments upon and interferences with County property, and increasingly severe threats to public health.

X. CAUSES OF ACTION

COUNT ONE

PUBLIC NUISANCE

204. The County repeats and incorporates by reference the preceding paragraphs as if fully set forth herein.

205. The County brings this claim seeking abatement pursuant to Washington public nuisance law, including RCW 7.48.010.

206. Defendants' production and promotion of massive quantities of fossil fuels, and their promotion of those fossil fuels' pervasive use, has caused, created, assisted in the creation of, contributed to, and/or maintained and continues to cause, create, assist in the creation of, contribute to and/or maintain global warming-induced sea level rise and other climate change hazards, a public nuisance in King County. Defendants, both individually and collectively, are substantial contributors to global warming and the County's attendant injuries and threatened injuries. The County's injuries and threatened injuries from each Defendant's contributions to global warming are indivisible injuries. Each Defendant's past and ongoing conduct is a direct and proximate cause of the County's injuries and threatened injuries. Defendants each should have known that this dangerous global warming with its attendant harms on coastal areas like King County would occur before it even did occur, and each Defendant in fact did have such knowledge. Each Defendant has at all relevant times been aware, and continues to be aware, that the inevitable emissions of greenhouse gases from the fossil fuels it produces combines with the greenhouse gas emissions from fossil fuels produced by the other Defendants, among others, to

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result in dangerous levels of global warming with grave harms for coastal areas like King County. Defendants were aware of this dangerous global warming, and of its attendant harms on coastal areas like King County, even before those harms began to occur. Defendants' conduct constitutes a substantial and unreasonable interference with and obstruction of public rights and property, including, *inter alia*, the public rights to health, safety, and welfare of King County residents and other citizens whose safety and lives are at risk from increased storm surge flooding and whose public and private property is threatened with widespread damage from global warming-induced sea level rise, greater storm surges, and flooding. Defendants' conduct continues to cause, create, assist in the creation of, maintain, and/or contribute to these impacts.

207. Defendants, individually and collectively, are substantial contributors to global warming and to the injuries and threatened injuries suffered by the County. Defendants have caused or contributed to accelerated sea level rise from global warming, which has and will continue to injure public property and structures owned and managed by King County, through increased inundation, storm surges, and flooding, and which threatens the safety and lives of King County residents. Defendants have inflicted and continue to inflict injuries upon the County that require the County to incur extensive costs to protect public and private property against increased sea level rise, inundation, storm surges, flooding, and other climate change impacts.

208. Defendants have promoted the use of fossil fuels at unsafe levels even though they should have known and in fact have known for many years that global warming threatened severe and even catastrophic harms to coastal areas like King County. Defendants promoted fossil fuels and fossil fuel products for unlimited use in massive quantities with knowledge of the hazard that such use would create.

209. Defendants are jointly and severally liable to the County for committing a public nuisance. The County seeks an order of abatement requiring Defendants to fund a climate

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change adaptation program for King County that addresses the risks of climate change to King County.[272]

210. Defendants continue to produce, market, and sell massive quantities of fossil fuels, and, as they know, the use of their fossil fuel products continues to emit greenhouse gases and exacerbate global warming and the County's injuries. Defendants' actions are causing recurring, intermittent, continuous, and/or ongoing harm to the County, including flooding and erosion affecting County property.

211. Plaintiff's real property has been and will be damaged by Defendants' nuisance and Plaintiff has spent and will spend substantial dollars to mitigate the damage caused by the nuisance. Such damages and losses include but are not limited to:

- Costs to analyze and evaluate the future impacts of climate alteration, the response to such impacts and the costs of mitigating, adapting to, or remediating those impacts;
- Costs associated with increased drought conditions including alternate planting and increase landscape maintenance or replacement costs;
- Costs associated with additional habitat protection and restoration actions to protect salmon species listed as threatened or endangered under the Endangered Species Act;
- Costs associated with repairing and replacing existing flood control, stormwater controls, and drainage measures, and repairing flood damage;
- Costs associated with retrofitting or including additional risk factors in the design of wastewater treatment and conveyance infrastructure;
- Costs of repair, maintenance, mitigation and rebuilding and replacement of road systems, including road drainage, to respond to the impacts of climate change;
- Costs associated with alteration and repair of bridge structures to retain safety due to increases in stream flow rates;
- Costs associated with sea level rise;
- Costs of repair of physical damage to buildings, facilities, and real property owned by Plaintiff;

[272] The County does not seek abatement with respect to any federal land.

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- Costs of analysis of alternative infrastructure design and construction, and costs to implement such alternative design and construction;
- Costs associated with additional emergency planning, preparedness, response and recovery actions associated with increased risk of heat waves, wildfires, and flooding;
- Costs associated with provision of additional public health services;
- Costs associated with increased cost to insure County assets;
- Costs associated with wildfire response, management, and mitigation;
- Loss of income from property owned by Plaintiff due to reduced agricultural productivity or lease or rental income while property is unusable; and
- Loss of property tax revenue to the County from any property affected by sea level rise or other climate/extreme weather impacts.

212. The nuisance caused by Defendants is reasonably abatable, including through the use of coastal armament to protect against sea level rise and other resiliency measures to protect against global warming-induced injuries.

213. Building infrastructure to protect King County and its residents, will, upon information and belief, cost hundreds of millions of dollars.

COUNT TWO

(TRESPASS)

214. The County realleges and reaffirms each and every allegation set forth in all the preceding paragraphs as if fully stated here.

215. Plaintiff is the owner, in lawful possession, of real property and has sovereign responsibilities for King County.

216. Defendants have each intentionally engaged in conduct that has caused and contributed to climate change, thus causing flood waters, rain, and sea water to enter Plaintiff's property. The County has not granted permission to Defendants to engage in this conduct—*i.e.*, to intentionally produce, market, and sell massive quantities of fossil fuels, and promote their pervasive use, all with knowledge by Defendants that doing so would lead to climate change-related injuries (including sea level rise).

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217. Defendants knew, with substantial certainty, that the use of their fossil fuel products would both cause climate change and cause these invasions of Plaintiff's property, without permission or right of entry.

218. These invasions are now occurring, and will continue to occur onto additional County-owned property in the future. The County has not granted permission to Defendants to engage in these invasions of the County's property, and the invasions were otherwise unjustified.

219. Plaintiff did not give Defendants permission for these invasions of property.

220. Defendants' trespasses are the direct and proximate cause of damages and losses to the Plaintiff.

221. Defendants' conduct, individually and collectively, was a substantial factor in causing global warming impacts, including accelerated sea level rise, increased storm surge inundation, and increased intensity and frequency of precipitation, and was the actual and proximate cause of the invasion of the County's property.

222. Defendants continue to produce, market, and sell massive quantities of fossil fuels, and, as they know, the use of their fossil fuel products continues to emit greenhouse gases and exacerbate global warming and the County's injuries. The County has not granted permission to Defendants to engage in this conduct—*i.e.*, to intentionally produce, market, and sell massive quantities of fossil fuels, and promote their pervasive use, all with knowledge by Defendants that doing so would lead to climate change-related injuries (including sea level rise). Defendants' actions are causing recurring, intermittent, continuous, and/or ongoing harm to the County, including flooding and erosion affecting County property.

223. Defendants' conduct constitutes a continuing, unauthorized intrusion and a continuing trespass onto the County's property. Defendants' continued trespass has caused, and will continue to cause, substantial damage to the County. The County has not granted permission to Defendants to engage in these intrusions and trespasses on the County's property, which are otherwise unjustified.

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224. Plaintiff's real property has been and will be damaged by Defendants' trespasses and Plaintiff has spent and will spend substantial dollars to mitigate the damage caused by the trespasses. Such damages and losses include but are not limited to:

- Costs to analyze and evaluate the future impacts of climate alteration, the response to such impacts and the costs of mitigating, adapting to, or remediating those impacts;
- Costs associated with increased drought conditions including alternate planting and increase landscape maintenance or replacement costs;
- Costs associated with repairing and replacing existing flood control, stormwater control and drainage measures, and repairing flood damage;
- Costs of repair, maintenance, mitigation and rebuilding and replacement of road systems, including road drainage, to respond to the impacts of climate change;
- Costs associated with alteration and repair of bridge structures to retain safety due to increases in stream flow rates;
- Costs associated with sea level rise;
- Costs associated with retrofitting or including additional risk factors in the design of wastewater treatment and conveyance infrastructure;
- Costs of repair of physical damage to buildings, facilities, and real property owned by Plaintiff;
- Costs of analysis of alternative infrastructure design and construction and costs to implement such alternative design and construction;
- Costs associated with additional emergency planning, preparedness, response and recovery actions associated with increased risk of heat waves, wildfires, and flooding;
- Costs associated with provision of additional public health services;
- Costs associated with increased cost to insure County assets;
- Costs associated with wildfire response, management, and mitigation;
- Loss of income from property owned by Plaintiff due to reduced agricultural or forest productivity or lease or rental income while property is unusable; and
- Loss of property tax revenue to the County from any property affected by sea level rise or other climate/extreme weather impacts.

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225. The trespass caused by Defendants is reasonably abatable, including through the use of coastal armament to protect against sea level rise, and other resiliency measures to protect against global warming-induced injuries.

226. These damages and losses are the direct and proximate result of climate alteration by Defendants in excess of historical trends in climate variation.

RELIEF REQUESTED

WHEREFORE, Plaintiff prays for judgment and an order against each Defendant, jointly and severally, as follows:

A. Finding Defendants BP, Chevron, ConocoPhillips, Exxon, and Shell jointly and severally liable for causing, creating, assisting in the creation of, contributing to, and/or maintaining a public nuisance;

B. Ordering an abatement fund remedy to be paid for by Defendants to provide for infrastructure, costs of studying and planning, and other costs in King County necessary for King County to adapt to global warming impacts;

C. Compensatory damages in an amount according to proof, of the costs of actions King County has already taken, is currently taking, and needs to take to protect King County infrastructure and property, and to protect the public health, safety, and property of its residents from the impacts of climate change;

D. Awarding attorneys' fees as permitted by law;

E. Awarding costs and expenses as permitted by law;

F. Awarding pre- and post-judgment interest as permitted by law; and

G. Awarding such other relief as this Court deems just and proper.

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Dated: August 17, 2018

Respectfully submitted,

KING COUNTY

/s/ Jennifer Stacy

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Attorneys for Plaintiff

CERTIFICATE OF SERVICE

I hereby certify that on August 17, 2018, I filed the foregoing First Amended Complaint with Clerk of Court. The CM/ECF system will provide service of such filing via Notice of Electronic Filing (NEF) to all counsel of record.

/s/ *Steve W. Berman*
Steve W. Berman

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Exhibit 1: "Range of Global Mean Temperature From 1850 to the Present with the Projected Instantaneous Climatic Response to Increasing CO2 Concentrations"

Source: M.B. Glasser, Memo for Exxon management (Nov. 12, 1982), pp. 1, 28

EXXON RESEARCH AND ENGINEERING COMPANY
P.O. BOX 101, FLORHAM PARK, NEW JERSEY 07932

M. B. GLASER
Manager
Environmental Affairs Programs

Cable: ENGREXXON, N.Y.

November 12, 1982

CO_2 "Greenhouse" Effect

82EAP 266

TO: See Distribution List Attached

Attached for your information and guidance is briefing material on the CO_2 "Greenhouse" Effect which is receiving increased attention in both the scientific and popular press as an emerging environmental issue. A brief summary is provided along with a more detailed technical review prepared by CPPD.

The material has been given wide circulation to Exxon management and is intended to familiarize Exxon personnel with the subject. It may be used as a basis for discussing the issue with outsiders as may be appropriate. However, it should be restricted to Exxon personnel and not distributed externally.

Very truly yours,

M. B. Glaser

M. B. GLASER

MBG:rva

Attachments

H. N. WEINBERG
NOV 15 1982

Figure 9

Range of Global Mean Temperature From 1850 to the Present with the Projected Instantaneous Climatic Response to Increasing CO_2 Concentrations.