

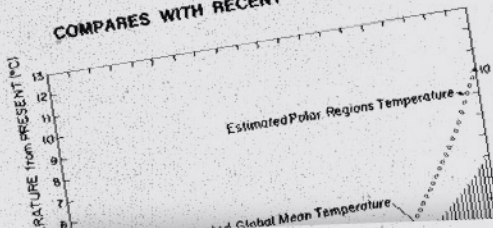
PRODUCTS RESEARCH DIVISION

J.F. BLACK
Scientific Advisor

June 6, 1978

The Greenhouse Effect

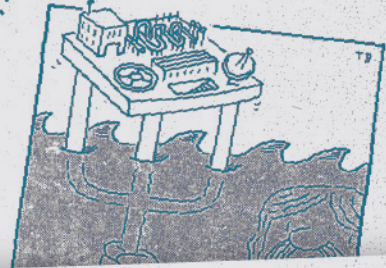
FIGURE 10
**HOW PREDICTED ΔT
COMPARES WITH RECENT TEMPERATURES**



**Greenhouse Effect:
Shell Anticipates
A Sea Change**

Whether global warming will raise the level of the world's oceans is still being debated, but engineers who build natural-gas production platforms at Shell Oil do not want to take chances. In what is considered the first major project that takes account of the changes the greenhouse effect is expected to bring, the engineers are designing a huge platform that anticipates rising water in the North Sea.

Norske Shell, the company's Norwegian subsidiary, had been planning to build in the Troll gas field a 1.5-million-metric-ton structure that would stand in more than 300 meters of water that would be about 100 meters deep in 2050.



EXXON POSITION

EMPHASIZE THE UNCERTAINTY IN SCIENTIFIC CONCLUSIONS REGARDING THE ENHANCED GREENHOUSE EFFECT.

Center for
**Climate
Integrity**

SEPTEMBER 2026

Climate Fraud 101

Big Oil's Climate Deception
Explained in 101 Documents

1957 - 2026

On net-zero emissions...

- ☐ SOCIETAL GOAL
- ☐ REQUIRES ECONOMY-WIDE ACTION
- ☐ SHOULD NOT IMPLY OR SUGGEST IT'S A SHELL TARGET

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Acknowledgements

This report is available at climateintegrity.org/projects/climate-fraud-101.

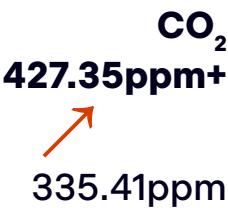
For questions or more information, reach out to info@climateintegrity.org.

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About CCI

The Center for Climate Integrity empowers communities and elected officials with the knowledge and tools they need to hold oil and gas corporations accountable for the massive costs of climate change.

Learn more at climateintegrity.org.



CONTENTS

INTRODUCTION.....4

CHAPTER 1 An Early Warning:
Identifying the CO₂ problem (1957–1974)6

CHAPTER 2 Predicting a Global Catastrophe:
The development of a “clear scientific consensus” (1978–1982)9

CHAPTER 3 Planning to Protect Fossil Fuels:
Preparing an “aggressive defensive program” (1979–1989) 12

CHAPTER 4 “Emphasize the Uncertainty”:
Big Oil’s crusade against climate science (1988–1996) 19

CHAPTER 5 Case Study:
The Global Climate Coalition (1993–1996)..... 25

CHAPTER 6 A “Discernable Human Influence”:
Developing a collective response (1997–1999)..... 30

CHAPTER 7 “A New Type of Energy Company”:
The fallacy of a sustainable fossil fuel industry (2001–2006) 38

CHAPTER 8 False Solutions:
Carbon capture, natural gas, and the technologies of delay (2006–2014)..... 44

CHAPTER 9 “An Unsustainable Path”:
Doubling down on false solutions post-Paris (2015–2019)..... 49

CHAPTER 10 “Too Far and Too Fast”:
Voluntary (in)action and the empty ambitions of net zero (2016–2026) 56

CONCLUSION..... 63

DOCUMENTS..... 65

INTRODUCTION

Deadly heatwaves. Widespread wildfires. Rising seas. Record floods. Changing precipitation patterns. Agricultural disruption.

As early as 1957, major oil and gas companies learned that burning fossil fuels would fundamentally alter the Earth's climate and pose significant risks to humanity. For decades, fossil fuel industry leaders were warned that unless action was taken, communities across the globe would suffer catastrophic harms caused by their products. What they did with that knowledge is **the story of the most consequential corporate deception campaign in world history.**

The climate crisis that is so palpable today was not inevitable. It is the result of decades of deliberate decisions by the fossil fuel industry — oil and gas producers and their network of trade associations, front groups, and enabling institutions — to conceal the harms of their products, sow doubt about the reality of climate science, and obstruct every effort to reduce the use of fossil fuels and respond to the threat of climate change.

What follows is a collection of 101 documents that explain Big Oil's climate fraud across the last seven decades.

It includes confidential industry planning documents, internal communications and presentations, public reports, speeches made by company executives, patents, and more. Together, these pieces of evidence provide a vivid picture of the fossil fuel industry's knowledge of their products' role in climate change, plans to deceive the public and undermine confidence in climate science, and active efforts to obstruct policy responses that would have helped to address the problem. These documents — obtained by researchers, academics, journalists, and lawmakers from various public repositories, lawsuits, and subpoenas — make clear that Big Oil has known and lied about its central role in the climate crisis for decades.

In the years after industry leaders quietly learned that their products were contributing to a greenhouse effect that would raise global temperatures, oil and gas companies repeatedly acknowledged and contributed to the developing scientific consensus on the topic. In some instances, their pioneering research even refuted the work of climate skeptics, further refining scientists' collective understanding of the processes which produced increased global temperatures as a result of fossil fuel combustion. Rather than encouraging proactive measures, however, the industry's leadership

championed a wait-and-see approach. Ignoring their scientists' own warnings of the urgent need for action, oil and gas producers instead planned how they would protect their business interests by discouraging a shift away from fossil fuels.

When the climate alarm bells reached policymakers and the public, the fossil fuel industry put its obstruction plans into practice. Oil executives continued to insist that the actual risk to the world came from premature regulation of fossil fuels, not the failure to mitigate global warming. But the industry's delay tactics took on an entirely new dimension as well. Companies that had previously advanced scientific knowledge of climate change came to deny its very existence. Industry trade organizations worked to undermine climate policy at every level of government; front groups celebrated their success in manipulating public opinion; select unscrupulous scientists peddled debunked theories while hiding their fossil fuel funding. These efforts combined to stall virtually every attempt to counter the crisis that the same industry had predicted in years prior.

The evidence of anthropogenic global warming eventually proved to be impossible to ignore, and outright denial ceased to be an option for all but the most fervent skeptics. Obstruction, in that context, took on yet another new form. Oil and gas producers began to acknowledge aspects of the problem, but downplayed scientific confidence and claimed that plenty of time remained to formulate a response. The industry insisted that any alternatives to fossil fuels were risky and unproven while ignoring the immediate crisis confronting humanity at large. At the same time, they advocated for 'solutions' that would protect the fossil fuel economy but offered limited proven climate benefits. The industry most immediately responsible for the climate crisis framed itself instead as the world's savior, despite all evidence to the contrary.

As these documents make clear, Big Oil knew its products fuel climate change, lied to the public about that reality, and must be held accountable.

CHAPTER 1

AN EARLY WARNING: IDENTIFYING THE CO₂ PROBLEM (1957–1974)

CO₂
341.48ppm
↑
335.41ppm

Between the 1950s and 1970s, fossil fuel companies helped to shape the emerging field of climate science. Building on research dating back to the late 19th century, industry scientists recognized that carbon dioxide was becoming increasingly concentrated in Earth's atmosphere, that the combustion of fossil fuels was the most significant contributing factor, and that rising carbon dioxide levels were likely to produce a warming greenhouse effect. Although the specific impacts of an altered climate remained uncertain, the fossil fuel industry recognized the potential for substantial consequences and began to anticipate how global warming could affect the industry's operations and financial viability in the future.

The fossil fuel industry's earliest contributions to climate research built on existing scientific findings to show that its products were the primary cause of the increased carbon dioxide levels in the atmosphere. Researchers at Humble Oil (now ExxonMobil) published a study in 1957 titled "Radiocarbon Evidence on the Dilution of Atmospheric and Oceanic Carbon by Carbon from Fossil Fuels" (**Document 1**). The paper evaluated "the fate of the enormous quantity of carbon dioxide which has been introduced into the atmosphere since the beginning of the industrial revolution," finding that the increase had resulted, in large part, "from the combustion of fossil fuels." Humble's scientists used newly-developed quantitative methods to determine that fossil fuel use was already having an impact on the planet's carbon cycle.

Around the same time, scientists warned leaders within the fossil fuel industry about the environmental consequences of rising carbon dioxide levels caused by their products. At an American Petroleum Institute (API) symposium in 1959 (**Document 2**), renowned physicist Edward Teller addressed an audience of industry executives with a stark forecast: if fossil fuel consumption continued to grow, measurable global warming could occur by the year 2000. Explaining the mechanics of the greenhouse effect, Teller warned that "if we keep on with our exponential rise in the use of purely conventional fuels ... there will be a serious additional impediment for the radiation leaving the earth." Increased



Edward Teller,
Hungarian-American
theoretical physicist

Photo: Lawrence Livermore National Laboratory

atmospheric carbon dioxide could raise global temperatures to a level “sufficient to melt the icecap and submerge New York,” he explained. “All the coastal cities would be covered, and since a considerable percentage of the human race lives in coastal regions, I think that this chemical contamination is more serious than most people tend to believe.” In light of these risks, Teller concluded by encouraging the development of alternative energy sources, noting that “any new fuels we find will be welcome.”

By 1965, the threat posed by rising carbon dioxide levels from fossil fuel combustion had reached the attention of the federal government. That year, President Lyndon B. Johnson’s Science Advisory Committee released a landmark comprehensive report on pollution (**Document 3**) that examined humanity’s responsibility for widespread environmental degradation. A section devoted to atmospheric carbon dioxide warned that concentrations had risen significantly since the Industrial Revolution and projected that this increase would lead to measurable warming, echoing Teller’s earlier predictions. It concluded with an ominous observation: **“Man is unwittingly conducting a vast geophysical experiment”** by releasing massive quantities of carbon dioxide into the atmosphere through the burning of fossil fuels.

The fossil fuel industry recognized the Science Advisory Committee’s report as a warning of industry disruption. That same year, Frank Ikard, then-president of API, the industry’s principal trade and lobbying organization, addressed the report’s findings during the group’s annual meeting (**Document 4**). “One of the most important predictions of the report,” Ikard explained, “is that **carbon dioxide is being added to the earth’s atmosphere**” by fossil fuel use **“at such a rate that by the year 2000 the heat balance will be so modified as possibly to cause marked changes in climate beyond local or even national efforts.”** He then emphasized one of the report’s most consequential points for the petroleum industry: that securing an alternative energy source was “likely to become a national necessity.”

While exploring possible responses to the growing threat of climate change, the fossil fuel industry expanded its efforts to understand atmospheric processes and the role that carbon dioxide and other pollutants played in altering the climate. In 1968, API commissioned a report from the Stanford Research Institute (SRI) titled *Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants* (**Document 5**). The document reinforced the conclusions of the 1965 Science Advisory Committee, confirming that fossil fuel combustion had already released enough carbon dioxide to produce measurable increases in atmospheric concentrations. Echoing earlier warnings, the report noted: “If CO₂ levels continue to rise at present rates, it is likely that noticeable increases in temperature

/// All the coastal cities would be covered, and since a considerable percentage of the human race lives in coastal regions, I think that this chemical contamination is more serious than most people tend to believe.”

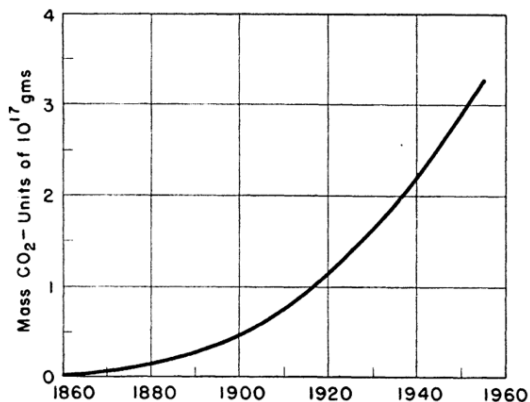


FIG. 1 — Cumulative carbon dioxide released to atmosphere by combustion of fossil fuels

Document 1:

Humble Oil, H. R. Brannon, *Radiocarbon Evidence on the Dilution of Atmospheric and Ocean Carbon by Carbon from Fossil Fuels*

could occur. Changes in temperature on a world-wide scale could cause major changes in the earth's environment over the next several hundred years including changes in the polar ice caps." A supplemental SRI report from the following year explained that **"significant temperature changes could be expected to occur by the year 2000 as a result of increased CO₂ in the atmosphere"** and noted the potential for "severe" environmental damage as a result.

Once the fossil fuel industry had a clear understanding of the climatic changes that the continued burning of their products would likely cause, industry leaders began to take concrete steps to protect their business interests. Major oil companies such as Esso (now ExxonMobil), Chevron, and Texaco (Chevron) invested significant resources to expand drilling as climate change opened new areas to development. In 1973 and 1974, these three companies each obtained patents **(Document 6)** for equipment that would allow them to access areas previously blocked by polar ice. These patents serve as evidence that the industry anticipated significant environmental changes — and sought to capitalize on them by exploiting opportunities that would emerge in a warmer world.

United States Patent [19] Devine

[11] 3,727,571

[45] Apr. 17, 1973

[54] ICEBREAKING CARGO VESSEL

[75] Inventor: Walter B. Devine, Houston, Tex.

[73] Assignee: Esso Research and Engineering Company, Linden, N.J.

[22] Filed: July 7, 1971

[21] Appl. No.: 160,385

[52] U.S. Cl. 114/41

[51] Int. Cl. B63b 35/08

[58] Field of Search 114/40-42

[56] References Cited

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499,296 6/1893 Kruisbrink 114/42

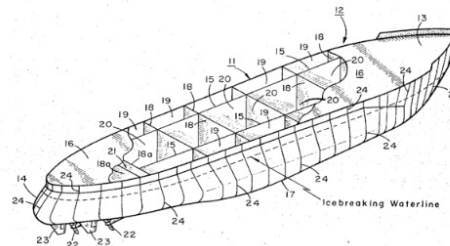
FOREIGN PATENTS OR APPLICATIONS

64,173 6/1900 N.

Primary Examiner—Trygve M. Blix
Attorney—Thomas B. McCulloch et al.

[57] ABSTRACT

A hull shape for an icebreaking cargo vessel, such as a tank ship, is provided which provides for lower ice breaking resistance, greater displacement in ice, and greater rudder and screw protection against ice when proceeding astern in ice laden or ice covered waters than conventional icebreaking vessels. The hull shape is such that a down breaking bow and a maximum ice-water line beam is provided forward of the midpoint of the hull while aft of the midpoint the ice-water line beam is smaller than that forward, the hull beam below the maximum ice-water line beam being greater than the ice-water line beam in the aft part of the hull. Vertical sections through the hull forward of the midpoint slope downwardly and inwardly while aft the vertical sections slope downwardly and outwardly.



Document 6:

Patents for equipment filed by Esso (Exxon), Chevron, and Texaco

CHAPTER 2

PREDICTING A GLOBAL CATASTROPHE: THE DEVELOPMENT OF A “CLEAR SCIENTIFIC CONSENSUS” (1978–1982)

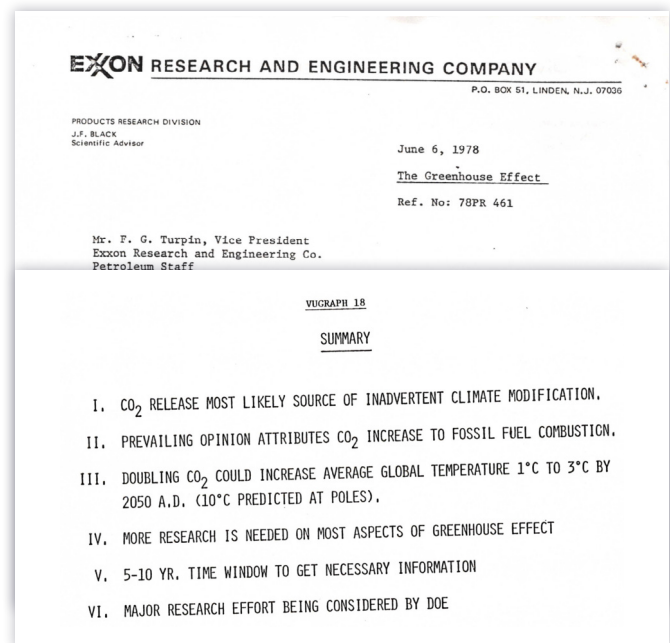
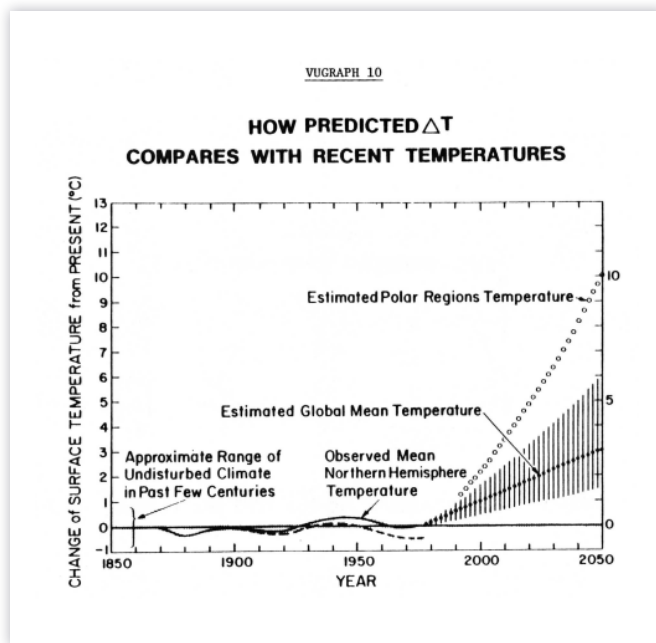
CO₂
341.48ppm

335.41ppm

The fossil fuel industry engaged in cutting edge climate science as a consensus on anthropogenic global warming took shape in the late 1970s and early 1980s. Far from undermining the emerging consensus, industry researchers provided further support for a scientific theory that they had begun to identify over the previous 30 years: fossil fuel combustion would produce a warming effect that could substantially alter global climate processes, which could in turn trigger a cascade of catastrophic disruptions across ecosystems and economies.

By the late 1970s, the fossil fuel industry was investing heavily in understanding how the global warming caused by its products would affect the planet. A 1978 Exxon internal document titled “The Greenhouse Effect” (**Document 7**), summarizing a presentation given the previous year by Exxon scientist James Black, underscored the seriousness with which the industry was treating the issue. In addition to explaining the mechanisms of the greenhouse effect and noting that **“current scientific opinion overwhelmingly favors attributing atmospheric carbon dioxide increase to fossil fuel combustion,”** Black warned that a doubling of atmospheric carbon dioxide could raise average global temperatures by 2 to 3 degrees Celsius, and by as much as 10 degrees at the poles. The memo also stated that humanity only had a five to 10-year window to gather critical information “before the need for hard decisions.” Black outlined a detailed picture of the consequences: in addition to rising temperatures and sea level rise, he projected shifts in rainfall distribution, major disruptions to agricultural systems, and widespread ecological changes, all driven by continued fossil fuel use.

Exxon’s ongoing internal research continued to enhance its understanding of the climate risks tied to fossil fuel combustion. A 1980 internal report titled “Exxon Research and Engineering Company’s Technological Forecast: CO₂



Greenhouse Effect” (**Document 8**) built on earlier findings, reflecting a growing scientific consensus and deeper engagement in the research by Exxon scientists. The memo reaffirms the likely consequences of rising carbon dioxide levels in coming decades, echoing Black’s 1978 warning: rising temperatures, disrupted rainfall, agricultural impacts, and flooding in places like Washington, D.C. and much of Florida. While positioning global warming as “not as significant to mankind as a nuclear holocaust or world famine,” the memo acknowledged that without significant early investment and action, no alternative to fossil fuels could be deployed in time to meet the challenge they themselves were forecasting.

Document 7:
Memo on 1977 Presentation
by Exxon scientist James
Black, “The Greenhosue
Effect”

The early 1980s also brought a turning point: mounting evidence suggested a clearer timeline for when climate catastrophe would unfold. In a 1981 inter-office memo (**Document 9**), Exxon scientist Roger Cohen critiqued a colleague’s draft report for understating the risks, warning that describing climate changes as “well short of catastrophic” might, in fact, be “too reassuring.” Cohen explained that it was distinctly possible the consequences would indeed be “catastrophic (at least for a substantial fraction of the earth’s population).” He recommended that the report instead end by noting that advances in climate modeling could soon offer “strong evidence for a delayed CO₂ effect of a truly substantial magnitude” — one likely to emerge after the year 2000.

Exxon’s own research provided additional support for the conclusion that fossil fuel combustion was contributing to global warming. A 1982 internal letter (**Document 10**) from Cohen to Exxon’s manager of environmental affairs summarized the company’s status on climate modeling, noting a “clear scientific

it is distinctly possible that the CPD scenario will later produce effects which will indeed be catastrophic (at least for a substantial fraction of the earth’s population)."

consensus” that doubling atmospheric carbon dioxide would raise average global temperatures by 1.5 to 4.5 degrees Celsius, triggering “significant changes in the earth’s climate, including rainfall distribution and alterations in the biosphere.” Cohen evaluated and dismissed the conclusions drawn by one climate change skeptic who had proposed that a global evaporative buffering system would greatly reduce the effect of global warming from increased atmospheric carbon dioxide, reinforcing the conclusions of the already-substantial consensus within the scientific community. The memo also reaffirmed previous conclusions that warming would likely be detectable before the atmospheric concentration of carbon dioxide doubled, with the first clear signs expected around the turn of the millennium.

A scientific literature review, conducted the same year by researchers at the Lamont-Doherty Geological Observatory at Columbia University on behalf of the American Petroleum Institute (API) (**Document 11**), reached similar conclusions about the impacts of continued fossil fuel use on the climate. The comparative analysis of several kinds of climate models explained that although the timing of the greenhouse effect impacts would depend upon “the level of increasing energy use per year and the mixture of carbon based fuels,” global warming was virtually guaranteed: **“all climate model studies indicate that a doubling of atmospheric CO₂ will produce a significant increase in global and annual mean temperature of the earth.”** Further, the report explained that these projections only accounted for carbon dioxide, and that other trace gases such as methane could significantly exacerbate the greenhouse effect. The global warming these models anticipated could “have serious consequences for man’s comfort and survival,” the report explained, “since patterns of aridity and rainfall can change, the height of the sea level can increase considerably and the world food supply can be affected.” The researchers concluded that ongoing efforts to improve climate modeling to determine the extent of the warming were “a necessity for any realistic long term planning by government and industry.”

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.”

CHAPTER 3

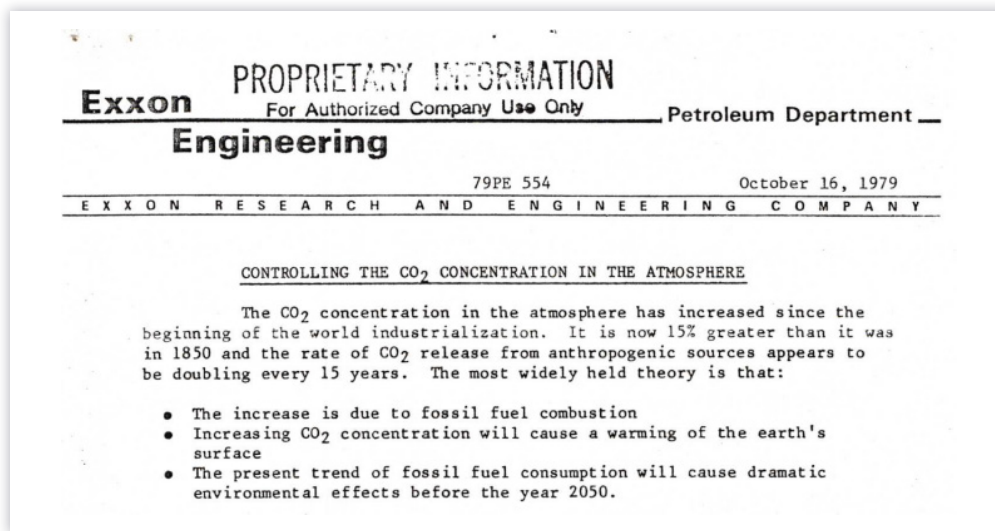
PLANNING TO PROTECT FOSSIL FUELS: PREPARING AN “AGGRESSIVE DEFENSIVE PROGRAM” (1979–1989)

CO₂
353.20ppm
↑
336.84ppm

Over the course of the 1980s, oil and gas companies came to understand that climate change posed an existential business risk. The now-established scientific consensus on anthropogenic global warming virtually guaranteed that any efforts to reduce emissions would start with restricting fossil fuel use, directly jeopardizing the producers’ core business. Increasingly viewing the narrowing gap between scientific consensus and public awareness as a problem to solve, the industry treated the delayed onset of measurable global warming as an opportunity to influence public opinion and delay meaningful action. In doing so, oil and gas companies sought to safeguard their long-term interest — the continued production of fossil fuels — before policies to counteract climate change became unavoidable.

By the late 1970s, the industry was grappling with the need to drastically reduce fossil fuel usage. One of the first examples of this concern appears in a 1979 internal Exxon report titled “Controlling the CO₂ Concentration in the Atmosphere” ([Document 12](#)). The study, authored by a summer employee, then shared among Exxon staff, modeled various energy-use scenarios and their corresponding carbon dioxide emissions, projecting resulting atmospheric concentrations and the potential climate effects. While acknowledging remaining uncertainties, the report explained that “there is a possibility that an atmospheric CO₂ buildup will cause adverse environmental effects in enough areas of the world to consider limiting the future use of fossil fuels as major energy sources.” A memo circulated within the company alongside the report was clear about the implications of the findings: “should it be deemed necessary to maintain atmospheric CO₂ levels to prevent significant climatic changes, dramatic changes in patterns of energy use would be required.”

“ should it be deemed necessary to maintain atmospheric CO₂ levels to prevent significant climatic changes, dramatic changes in patterns of energy use would be required.”

**Document 12:**

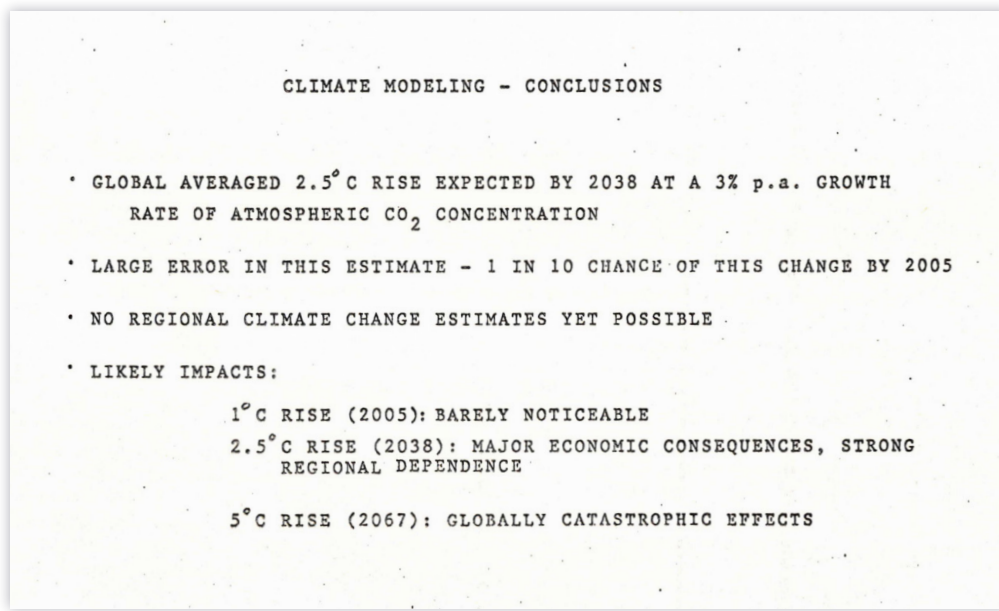
Exxon Memo from
W. L. Ferral with attached
report, "Controlling the
CO₂ Concentration in
the Atmosphere"

Anticipating that increased awareness of global warming was likely to lead to government regulation of carbon dioxide emissions, Exxon started to consider how it might respond. An internal Exxon memo from 1979, entitled "Research in Atmospheric Science" (**Document 13**), reveals early concerns about regulatory and reputational risk, citing the aircraft and chemical industries' failure to anticipate restrictions on freon and other ozone-depleting substances. The author of the memo, Exxon scientist Henry Shaw, urged the company to guide the narrative around pollution before government agencies began to do so themselves, proposing an "aggressive defensive program" in atmospheric and climate science to get ahead of possible legislation and public concern.

The following year, Exxon Research & Engineering hired outside public relations experts to help develop a communications plan (**Document 14**) to promote the company's greenhouse gas research. One stated objective was to establish "Exxon's credibility as a leading authority on CO₂/Greenhouse science, particularly among opinion leaders who are not scientists" and help to "bring about better public understanding of the CO₂/Greenhouse Effect." The public relations program was conceived as a way to preempt increased public concern about global warming since "the popular media are giving increasing attention to doom-saying theories about dramatic climate changes and melting polar [sic] icecaps" — and because "future public decisions aimed at controlling the build-up of atmospheric CO₂ could impose limits on fossil fuel combustion."

Concerns about the potential for climate policy also shaped Exxon's research program. A 1981 internal report, titled "Atmospheric CO₂ Scoping Study" (**Document 15**), weighed whether the company should pursue a more comprehensive research agenda on atmospheric carbon dioxide and climate change, including an "assessment of the possible impact of the greenhouse effect on

future public decisions aimed at controlling the build-up of atmospheric CO₂ could impose limits on fossil fuel combustion."

**Document 16:**

API CO₂ and Climate Task Force (AQ-9) Meeting Minutes with Attached Report, "The CO₂ Problem; Addressing Research Agenda Development"

Exxon's Business." While the study concluded that "[t]here is no near term threat of legislation to control CO₂," it acknowledged that regulatory and political pressure were likely on the horizon since energy conservation and renewable energy "represent the only options that might make sense" for mitigating carbon dioxide emissions. To minimize risk to the company, Exxon continued investing in carbon dioxide research, both to strengthen the company's image and to provide the government with information that might forestall "poorly formulated" policy. The internal documents also detailed concern about climate policy extending beyond Exxon, noting that the American Petroleum Institute (API) had created a small study group on carbon dioxide and the International Chamber of Commerce was considering a position paper on the issue.

The fossil fuel industry had already begun to engage in long-term planning around the issue of climate change by 1980, when representatives of Exxon, Texaco (Chevron), and Standard Oil of Ohio (BP) attended a meeting of API's CO₂ Climate Task Force (**Document 16**). A presentation delivered at the private meeting explained that "[t]he physical facts agree" on the likelihood of large-scale global climate impacts within 50 years and the potential for a 5 degrees Celsius rise to produce "**globally catastrophic effects**" by 2067. In response, the presentation theorized that a reduction in fossil fuel use rates could considerably ease the "immediate problem," while recognizing that any significant shift in fossil fuel reliance would take decades to materialize. One central question posed — "what is the 50-year future of fossil fuel use?" — captures the industry's concern that its fate was tied to a number of extended timelines: the eventuality of climate change, a necessary energy transition, and a shifting policy landscape shaped by public opinion.

In the years that followed, the fossil fuel industry continued to wrestle with the long-term implications of climate change for both the planet and the future of energy. In 1982, E. E. David Jr., then-President of Exxon Research and Engineering, gave a speech titled “Inventing the Future: Energy and the CO₂ ‘Greenhouse’ Effect” (**Document 17**). David acknowledged that Exxon’s products were “really the heart of the energy and the CO₂ problem,” and stated that the “energy transition away from dependence upon fossil fuels” had already begun. The speech also highlighted the critical challenge posed by the delayed effects of carbon dioxide buildup and the narrow window for action — one that required Exxon to anticipate and prepare for future impacts well in advance. To that effect, he noted that Exxon was doing research into powerful batteries that could be used in electric cars and discussed solar and nuclear power, envisioning how Exxon could “play a powerful role in shaping the future.” The key questions, as David framed them, were not related to the science of climate change or the necessity of a shift away from fossil fuels, which were already well-established. What remained to be seen was instead what form energy policy would take and how companies like Exxon would choose to respond.

Despite David’s optimism about Exxon’s potential role in a sustainable energy future, internally, the company was more focused on how climate change could impact its core fossil fuel business. “CO₂ Greenhouse Effect: A Technical Review,” an internal Exxon briefing report from later that year (**Document 18**), evaluated the state of climate science through a critical lens and was “given wide circulation to Exxon management.” The briefing explained that warming caused by “energy-use-related greenhouse gases,”¹ including carbon dioxide and methane, was generally not expected to be detectable until the year 2000. It also briefing described how research conducted by the Massachusetts Institute of Technology (MIT) and Oak Ridge National Laboratory suggested that “the CO₂ problem may curtail fossil fuel use before physical depletion occurs” and that “vigorous development of non-fossil energy sources be initiated as soon as possible.”

Building on growing awareness of the delayed but significant impacts of climate change, the fossil fuel industry reached a definitive conclusion: the pending need for a transition away from fossil fuels posed significant risks to its business operations. A 1983 article in an internal Mobil newsletter, titled “Atmospheric Greenhouse Effect: Is Burning of Fossil Fuels Affecting World Climate?” (**Document 19**), highlighted the urgency for climate action. “[S]ome scientists argue that plans to cope with the greenhouse effect need to be made soon,” the unnamed Mobil author explained, “because of the extremely long lead time for any conceivable corrective actions.” The newsletter focused on how the issue could directly impact Mobil’s business, rather than its anticipated effect on



Photo: The New York Times

E. E. David Jr., President of Exxon Research & Engineering from 1977 to 1986

SOCIETY MUST CAREFULLY STUDY THE PROBLEM IN ORDER TO ESTABLISH A DESIRABLE COURSE OF ACTION. WE CAN EITHER ADAPT OUR CIVILIZATION TO A WARMER PLANET OR AVOID THE PROBLEM BY SHARPLY CURTAILING THE USE OF FOSSIL FUELS.

people and the planet, warning that if the greenhouse effect became “an urgent national concern,” it might lead to “restrictions on fossil fuel and land use” that would present a direct threat to Mobil’s profits.

Document 20:
Exxon Henry Shaw
Presentation, “CO₂
Greenhouse and
Climate Issues”

The following year, in 1984, Exxon researcher Henry Shaw gave a presentation titled “CO₂ Greenhouse and Climate Issues” (**Document 20**) to his Exxon colleagues at a company environmental conference. His talk compared Exxon’s own research to climate change assessments from the U.S. Environmental Protection Agency (EPA), National Research Council, MIT, and Stanford, focusing on differing views regarding the urgency and responsibility for action on climate change and the potential consequences of these decisions. Shaw was direct about the grim choice facing society: **“We can either adapt our civilization to a warmer planet or avoid the problem by sharply curtailing the use of fossil fuels.”** Despite Shaw’s conclusions and those of other Exxon employees in years prior,² the company’s position was that “adequate time to study the problem” remained and that “legislation is premature.”

The industry’s knowledge of the stark implications of climate change — for the planet, for people, and for the future of fossil fuels — had come to a head by the late 1980s. A confidential internal Shell report from 1988, titled “The Greenhouse Effect” (**Document 21**), was explicit: the environmental impacts of continued use of fossil fuels “could be larger than any that have occurred over the last 12,000 years,” bringing with them “major social, economic and political consequences.” Further, the report emphasized the urgency of taking action: “by the time the global warming becomes detectable it could be too late to take effective countermeasures.” The Shell report recommended analyzing policy and energy options, warning that “perception of a serious environmental threat could swing opinion away from fossil fuel combustion.”

An internal Shell document from the following year provides additional insight into the company’s concerns. “Scenarios 1989-2010: Challenge and Response” (**Document 22**) explained that evidence of human impacts on the climate was “strong and accumulating fast” and that global warming “is directly tied to man’s economic activities by the use of energy.” The document compared two climate

“ by the time the global warming becomes detectable it could be too late to take effective countermeasures.”

would be most dramatically changed. Something as simple as a moderate change in rainfall pattern disrupts eco-systems, and many species of trees, plants, animals and insects would not be able to move and adapt.

The changes would, however, most impact on humans. In earlier times, man was able to respond with his feet. Today, there is no place to go because people already stand there. Perhaps those in industrial countries could cope with a rise in sea level (the Dutch example) but for poor countries such defences are not possible. The potential refugee problem in GLOBAL MERCANTILISM could be unprecedented. Africans would push into Europe, Chinese into the Soviet Union, Latins into the United States, Indonesians into Australia. Boundaries would count for little – overwhelmed by the numbers. Conflicts would abound. Civilisation could prove a fragile thing. The logic of SUSTAINABLE WORLD is a society choosing to channel some investments into environmental maintenance against this contingency.

policy scenarios, one defined by aggressive efforts to reduce carbon dioxide emissions and the other representing a business-as-usual approach to fossil fuel use. Shell's planners anticipated that the planet would experience the effects of climate change in both scenarios, but even in the aggressive emissions reductions scenario the impacts of continued fossil fuel use would be dramatic: "There would be more violent weather – more storms, more droughts, more deluges. Mean sea level would rise at least 30 cm. Agricultural patterns would be most dramatically changed. Something as simple as a moderate change in rainfall pattern disrupts eco-systems, and many species of trees, plants, animals and insects would not be able to move and adapt." These environmental changes, Shell predicted, would have significant impacts on social structures as well. Facing pressures of mass migrations and ensuing conflicts, the scenario planners reached a dire conclusion: "Civilisation could prove a fragile thing."

Elaborating further on its climate policy scenarios, Shell predicted that efforts to combat global warming could affect their core business activities. An additional document discussing the company's confidential 1989 scenarios (**Document 23**) projected that greater influence from environmental groups and the marginalization of industrial lobbying under its "Sustainable World" scenario could lead to tighter emissions regulations, which would in turn result in "[h]eavy costs ... incurred by energy and chemical companies." The ultimate impact of increased awareness of climate change, the company anticipated, would be an energy system in which "renewables are actively promoted" and "[c]oncerns about global warming and depletion [would] depress production of fossil fuels."

Document 22:
Shell Confidential Group
Planning Scenarios,
"1989-2010: Challenge
and Response"

**/// Civilisation
could prove a
fragile thing."**

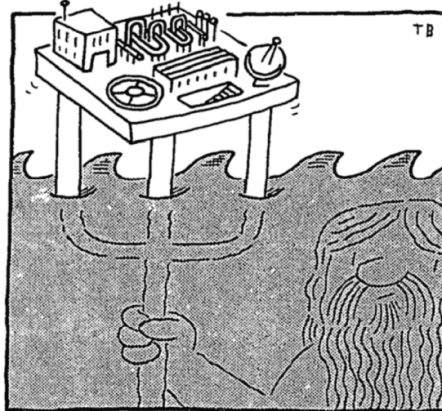
Greenhouse Effect: Shell Anticipates A Sea Change

Whether global warming will raise the level of the world's oceans is still being debated, but engineers who build natural-gas production platforms at Shell Oil do not want to take chances. In what is considered the first major project that takes account of the changes the greenhouse effect is expected to bring, the engineers are designing a huge platform that anticipates rising water in the North Sea.

Norske Shell, the company's Norwegian subsidiary, had been planning to build in the Troll gas field a 1.5-million-metric-ton structure that would stand in more than 300 meters of water, or about 1,000 feet, and rise 30 meters above the surface, or about 100 feet.

But if those are the dimensions of the structure when it is put in place in 1995, how much will be above the water in 2085, at the end of its life? Engineers are not sure. The global warming of the greenhouse effect, which is caused by carbon dioxide from combustion trapping the sun's heat in the atmosphere, is expected to raise the sea level in two ways: Warmer temperatures mean less water tied up in the ice caps, and therefore more in the oceans; also, warmer water occupies more space than cool water.

So the engineers are considering raising the platform from the standard 30 meters — the height now thought necessary to stay above the waves that



Tom Bloom

come in a once-a-century storm — to 31 or 32 meters.

A one-meter increase would cost an additional \$16 million, said Einar Knudsen, a spokesman for the company in Stavanger, Norway, and a two-meter rise roughly double that. The higher number is about 1 percent of the platform's projected cost.

Shell's problem with its gas platform is tougher than the engineering questions involved in building oil platforms, of which the North Sea has many. The oil platforms are typically expected to be in use for only 30 or 35 years. But according to Mr. Knudsen, "We have such huge gas reserves; we can see this production going on for up to 70 years."

Document 24:

Article from *The New York Times*, "Greenhouse Effect: Shell Anticipates a Sea Change"

As Shell advanced its internal understanding of climate change and the potential implications for its operations, it also began to implement physical adaptations to its existing infrastructure. In 1989, *The New York Times* reported (**Document 24**) that the oil major modified one of its offshore platforms in anticipation of rising sea levels — an example of the "[d]irect operational consequences" the company had noted in its 1988 report. Such measures indicate that, even in this early period, Shell was taking concrete steps to prepare for the material impacts of a warming climate that it deemed unpreventable. These adjustments, undertaken alongside ongoing scientific inquiry and regulatory concerns, reflect a pragmatic, continued recognition of climate change as a factor already shaping long-term business planning. All the while, the company failed to convey warnings about the impending climate crisis to civil society or governmental bodies.

1 Original emphasis.

2 A 1978 memo written by Exxon employee James Black ([Document 7](#)), for example, warned of only a 5-10 year window available to validate and address the greenhouse effect.

CHAPTER 4

"EMPHASIZE THE UNCERTAINTY": BIG OIL'S CRUSADE AGAINST CLIMATE SCIENCE (1988–1996)

CO₂
362.74ppm
↑
351.69ppm

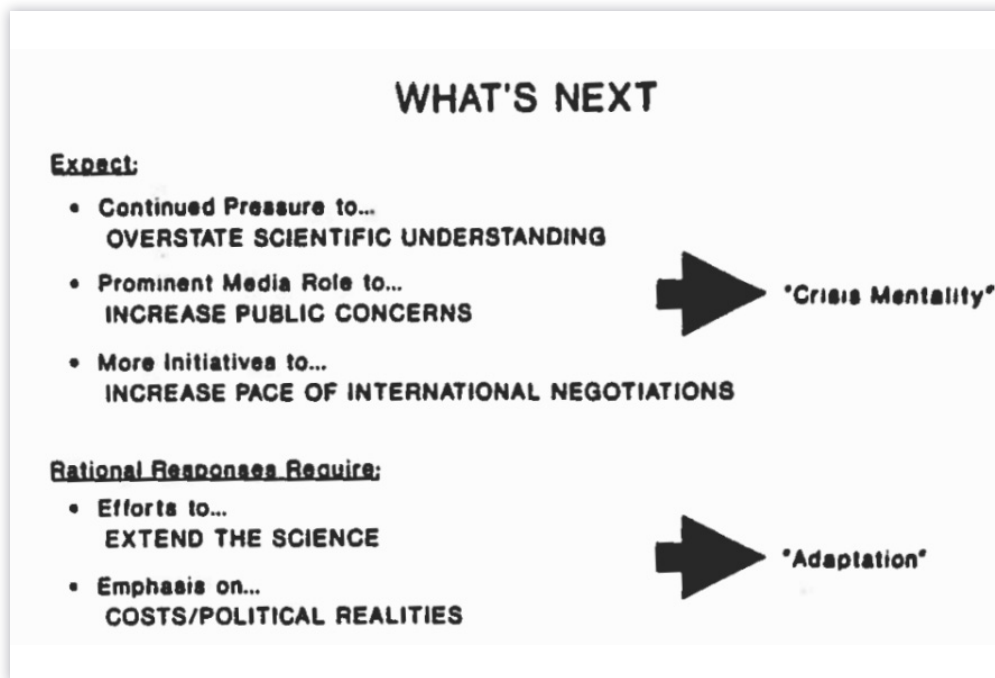
In 1988, NASA climatologist James Hansen triggered a national conversation about climate change when he testified in front of Congress that there was a discernable human impact on the climate. From the perspective of oil and gas companies, this watershed event transformed a long-anticipated risk into an immediate public policy crisis. The fossil fuel industry put years of preparation into action, launching a multifaceted, coordinated campaign to undermine confidence in climate science before measurable impacts became detectable and the evidence was undeniable. The foresight that had guided major oil and gas companies' operational adaptations for years was turned toward convincing policymakers and the public that an energy transition was impossible, that regulation was reckless and would harm the economy, and that climate science was not yet solid enough to warrant urgent action.

A confidential 1988 Exxon draft report titled "The Greenhouse Effect" (**Document 25**) marked the decisive turning point in both Exxon's internal position and the broader fossil fuel industry's public posture on climate change. Written only months after James Hansen's congressional testimony brought global warming into the public spotlight, the report summarized decades of Exxon's climate research — but recast it as uncertain, unreliable, and inconclusive. The company's position, as explained in the report, should be to **"emphasize the uncertainty in scientific conclusions,"** promote a "balanced" approach to climate research, and push back against what it

Document 25:
Exxon Memo from
Joseph Carlson with
Attached Draft Report,
"The Greenhouse Effect"

EXXON POSITION

O EMPHASIZE THE UNCERTAINTY IN SCIENTIFIC CONCLUSIONS REGARDING THE POTENTIAL ENHANCED GREENHOUSE EFFECT.



Document 26:
Exxon Presentation by
Duane G. Levine to Board
of Directors, "Potential
Enhanced Greenhouse
Effects: Status and Outlook"

described as exaggerated or sensational claims about the greenhouse effect that could accelerate investment in non-fossil fuel energy alternatives. The report noted that projected warming would not emerge clearly from the "uncertainty band for another 10 years," a window the company recognized as critical for shaping policy debates before observable evidence could weaken their claims of "uncertainty." The report concluded by revealing that Exxon sought to embed its stance within domestic and international organizations and use its leadership role in the American Petroleum Institute (API) to shape the industry's response to climate change.

By the following year, Exxon began implementing its strategy to undermine the public's view of climate science. An early 1989 presentation to Exxon's Board of Directors, "Potential Enhanced Greenhouse Effects: Status and Outlook" (**Document 26**), reflects a company increasingly alarmed by the speed with which climate science was beginning to influence public opinion and policy. Most urgent was the possibility that recent warming trends, if sustained, might signal that "enhanced greenhouse warming is finally becoming detectable" — a development that would compromise the company's strategy of emphasizing the uncertainty of climate science. To counter the emergence of a "crisis mentality" resulting from increased media attention and concern among policymakers, the presentation argued that the company should redirect attention away from the scientific consensus and toward more "rational responses," positioning delay and adaptation as more reasonable alternatives to immediate regulation. Exxon's research arm took the position that meaningful action should be post-

poned until both the science and its economic and political implications were better understood, a process the presentation said was “going to take years (probably decades).”

An article published later that year in Exxon Research & Engineering’s internal newsletter, *Connections*, further reinforced the company’s understanding of the true threat of climate change. In “Greenhouse Science” (**Document 27**), senior Exxon scientist Brian Flannery explained that the principal strategies under discussion for addressing rising carbon dioxide emissions would reduce demand for existing products in the short run and potentially force a transition to new energy systems over time. Exxon had anticipated that these issues “would some day have profound importance for the petroleum industry,” Flannery explained, but growing political momentum in favor of action on climate change showed that the problem was now an immediate concern. Flannery pointed to congressional calls for U.S. emissions reductions and how the greenhouse effect “surged to the center of attention last year when the hot summer and drought brought home the potential consequences of climate change,” revealing Exxon’s concern that observed measurable effects of climate change would only further increase public demands for action. Flannery anticipated that the company would be hard pressed to avoid business consequences. “Impacts on Exxon will come sooner from society’s efforts to reduce potential risks from climate change than from change itself,” he observed.

Exxon was not the only oil major experiencing growing concern over climate change’s threat to the petroleum industry. In a 1994 speech at an industry conference titled “Oil and Its Critics: The Facts and the Future” (**Document 28**), Chevron Chairman and CEO Kenneth Derr, who was also serving as chairman of API, described how he was “very much alarmed by this emerging consensus” that oil use was responsible for climate change and blamed the “highly publicized prediction of a catastrophic warming of the climate.” From Derr’s perspective, the danger lay in how this attention translated into political pressure to reduce the use of fossil fuels. He pointed to the “genuine threats” of efforts “to tilt the playing field away from oil and toward alternatives” and “the related effort to regulate away the last and least impact of petroleum.” Despite Derr’s warning that simply dismissing global warming as “unproven” invited damaging comparisons to the tobacco industry, his proposed answer to the industry’s predicament closely mirrored Exxon’s strategy: a coordinated effort to bring “the facts” to the public, with emphasis on how there was ample time for a gradual and orderly transition to alternative energy sources — a transition that Derr contended might actually be “unnecessary.”

Impacts on Exxon will come sooner from society’s efforts to reduce potential risks from climate change than from change itself.”



Photo: Chevron

Kenneth Derr, Chairman and Chief Executive Officer of Chevron from 1989 to 1999 and Chairman of the American Petroleum Institute in the mid-1990s

That same year, Shell produced a confidential internal report, “The Enhanced Greenhouse Effect: A review of the Scientific Aspects” (**Document 29**), which surveyed the state of climate science and assessed its implications for policy formation. Like its peers, Shell identified climate change as “the environmental concern with by far the greatest significance for the fossil fuel industry,” precisely because of its “major business implications.” Reflecting a clear shift from Shell’s earlier internal assessments, the report adopted the industry-wide position (created by Exxon) to **stress “[s]cientific uncertainty” and emphasize that efforts “to curb greenhouse gas emissions beyond ‘no regrets’ measures could be premature ... and further distort markets.”** In aligning itself with this position, Shell reinforced the broader industry strategy of treating uncertainty and economic risk as sufficient grounds to delay meaningful climate action, even as previous internal documents show knowledge that the consequences of such delay could be catastrophic.

As the oil majors found common ground in their efforts to thwart climate action, the industry’s primary trade organization took on the role of amplifying and formalizing a narrative of doubt for a broader audience. API’s 1996 publication *Reinventing Energy: Making the Right Choices* (**Document 30**) advanced a tightly-constructed argument grounded in two mutually reinforcing claims: that climate science remained too uncertain to justify binding action, and that any serious effort to curb oil use would impose unacceptable economic and social costs. Throughout its analysis, *Reinventing Energy* returned consistently to scientific uncertainty as the foundation for delay, arguing there was “no persuasive basis for forcing Americans to dramatically change their lifestyles to use less oil.” **API insisted that policy choices “need not be as draconian as the doomsayers advocate” since “[t]here will not be a serious penalty for waiting until we know more.”** In doing so, API sought to portray binding carbon regulations as reckless overreactions and position delay as the only reasonable policy choice.

The fossil fuel industry’s climate denial continued in a 1996 speech at a private club by William O’Keefe, Executive Vice President of API, pointedly titled “In Defense of Skepticism: Challenging the Political View of Climate Change” (**Document 31**). O’Keefe framed emerging climate action as a politically-driven overreaction that would “essentially eliminate fossil fuel use” and “strangle economic activity.” He argued that scientific findings were being selectively exaggerated to support predetermined policy goals and paraphrased noted climate science skeptic Richard Lindzen to claim that “current [climate] models are about as accurate as Ouija boards.” O’Keefe directed particular ire at the Intergovernmental Panel on Climate Change’s Second Assessment Report, released in December 1995, and its conclusion that “the balance of evidence



Photo: DeSmog

William O’Keefe, Executive Vice President and Chief Operating Officer of the American Petroleum Institute from 1974 to 1999 and Chairman of the Global Climate Coalition throughout the 1990s and early 2000s

suggests a discernible human influence on global climate”¹ — official confirmation of the measurable warming that the industry had anticipated for years. O’Keefe urged his audience to resist what he characterized as sensationalism, warning that “the number of possible environmental disasters that can be invented is infinite” and that “we cannot react to every nightmare that someone can dream up.” The appropriate response, he continued to insist, was to “be slow to commit,” and “postpone decisions while key uncertainties are resolved. In the case of global warming, we have time to address these uncertainties.”

API embraced an even more aggressive position opposing climate action after Exxon Chairman and CEO Lee Raymond replaced Chevron’s Kenneth Derr as API chairman. Raymond’s first major address in this capacity, delivered at API’s 1996 annual meeting (**Document 32**), framed climate change as the most serious long-term threat facing the petroleum industry because of the regulatory and reputational risks it posed. He warned that the industry faced an impending existential challenge from “so-called global climate change,” pointing to a United Nations-led effort moving toward decisions to cut fossil fuel use “based on the unproved theory that they affect the Earth’s climate.” Despite acknowledging that carbon dioxide emissions from fossil fuels were rising, Raymond insisted that scientific evidence remained inconclusive and that “[m]any scientists agree there’s ample time to better understand climate systems” before acting. To conclude that increasing emissions warranted cutting fossil fuel use, he argued, was “a long and dangerous leap” and **the industry needed to “do a better job of convincing others — politicians and the public alike — of the merits of our case.”** The issue of climate change demanded a unified strategy across the oil industry. “When we each put our own pet issue first, the industry becomes fragmented and unfocused,” he cautioned. But with “consistency in our message and confidence in our convictions,” Raymond argued the industry could reverse its plummeting reputation and preserve the conditions necessary for continued fossil fuel production, even as evidence of climate change was becoming harder to ignore.

The same forms of climate denial also appeared in Exxon’s public-facing communications. An article by Lee Raymond from a company publication the same year, “Climate change: don’t ignore the facts” (**Document 33**), framed climate policy as an assault on personal welfare, warning that “[p]recipitous, poorly considered action on climate change could inflict severe economic damage on industrialized nations and dramatically change your way of life.” He further insisted that proposals for regulation rested on “bad science, faulty logic or unrealistic assumptions.” In sharp contrast to the catastrophic impacts the company’s own researchers had projected for decades, Raymond framed climate change as an issue plagued by uncertainty, with possible effects that “could be both good



Photo: C-SPAN

Lee Raymond, Chairman and Chief Executive Officer of Exxon (later ExxonMobil) from 1993 to 2005 and Chairman of the American Petroleum Institute in the late 1990s and again in the early 2000s

and bad.” There was little need for action now, he argued, since “[t]echnological advances will make greenhouse emissions reductions easier in the future — if the developing science confirms that such steps are in fact needed.”

These public comments belied an apparent concern about the impacts of climate change on the company’s operations. Even as Exxon was publicly expressing doubt about the reliability of climate science, internal analyses treated global warming as a virtual certainty to be managed and, in some cases, exploited. A 1992 draft presentation (**Document 34**) by a scientist at Esso (Exxon) examined how warming would alter offshore petroleum operations in the Beaufort Sea, where sea ice posed the greatest obstacle to exploration. The study concluded that reduced ice cover would make drilling easier and more economical, noting that **“potential global warming can only help lower exploration and development costs.”** The same body of climate research the industry was publicly dismissing as inconclusive was, internally, treated as reliable guidance for both safeguarding infrastructure and advancing new business opportunities.

A joint venture that included Shell, Mobil, and Imperial Oil (Exxon) also accounted for the anticipated impacts of climate change. Plans for the Sable Project, a natural gas extraction facility, explicitly factored in a projected half-meter rise in sea level over its 25-year lifespan as a result of global warming. Its 1996 environmental impact statement (**Document 35**) noted that “[t]he estimated increase in water level due to global warming could vary from 0.20 to 1.4 m by the middle of the next century.” In a 2015 interview with the *Los Angeles Times*, a consultant hired by Mobil for the assessment explained that potential climate impacts such as extreme weather, rising wave heights, and sea level changes were “all part of the discussion.”²



Document 33:
Exxon Corporation
Publication by Chairman
Lee Raymond, “Climate
Change: don’t ignore
the facts”

- 1 Intergovernmental Panel on Climate Change, *IPCC Second Assessment: Climate Change 1995*, 1995, Internet Archive, <https://web.archive.org/web/20190805073018/https://archive.ipcc.ch/pdf/climate-changes-1995/ipcc-2nd-assessment/2nd-assessment-en.pdf>. The concern over this statement was not limited to API. The oil majors themselves also focused on this sentence both directly after the second IPCC assessment was published and in the years that followed. A Shell management brief on the report described this line as “probably the single most important and controversial statement in the whole of the 1996 Assessment.” See: Shell International Limited, SLBPA (JB), “The Intergovernmental Panel on Climate Change”, internal management brief, April 1996, DocumentCloud, <https://s3.documentcloud.org/documents/4411105/Document17.pdf>.
- 2 Amy Lieberman and Susanne Rust, “Big Oil Braced for Global Warming While It Fought Regulations,” *Los Angeles Times*, December 31, 2015, <https://graphics.latimes.com/oil-operations/>.

CHAPTER 5

CASE STUDY: THE GLOBAL CLIMATE COALITION

(1993–1996)

CO₂
362.74ppm
↑
357.21ppm

The fossil fuel industry responded to increased public awareness of climate change by casting doubt on climate science and obstructing efforts to mitigate the impacts of global warming. The companies sometimes acted under their own names, but more often relied upon a sprawling network of trade associations, front groups, astroturf campaigns, contrarian scientists, and well-funded lobbying operations to distribute coordinated deceptive messaging and implement the industry's dirtiest climate obstruction strategies. The embodiment of the industry's broader deception network was the Global Climate Coalition (GCC), a front group founded in 1989 with the explicit aim of shaping both public understanding and policy debates on climate change.

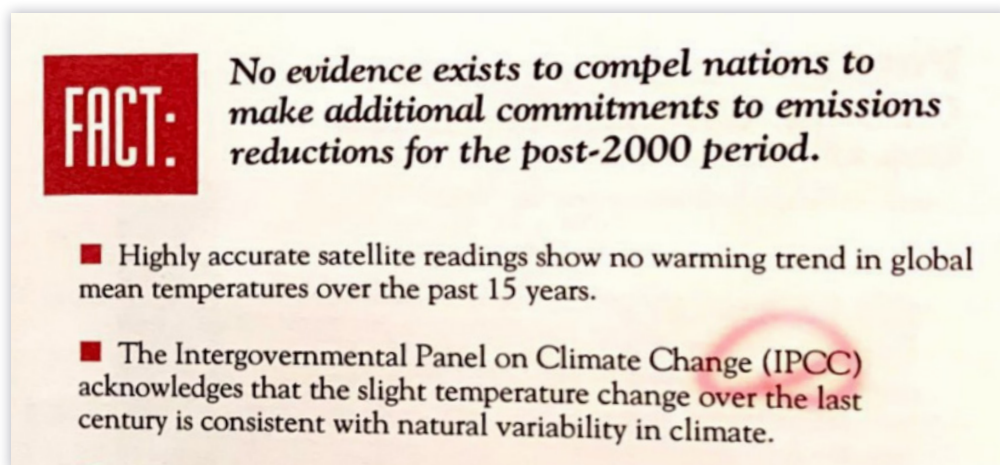
The GCC was established to "coordinate business participation in the scientific and policy debate on the global climate change issue." Its members included major oil and gas companies such as BP, Chevron, Exxon, and Shell; trade organizations representing the fossil fuel industry such as the American Petroleum Institute (API); and a wide array of trade associations and corporations from various other sectors. Documents make clear that for the GCC, participating in public debates meant working to undermine confidence in climate science and bring attention to the purported economic ramifications of climate action. Fourteen years after Exxon, a GCC member, concluded that "a clear scientific consensus has emerged regarding the expected climatic effects of increased atmospheric CO₂,"¹ a 1996 GCC backgrounder included in a collection of briefing reports (**Document 36**) claimed that "no science exists to accurately forecast long-term climate change" and that "there is no convincing evidence that future increases in greenhouse gas concentrations will produce significant climatic effects." In another briefing, the GCC argued that "U.S. living standards and lifestyles would be seriously damaged by many of the greenhouse gas abatement proposals currently under consideration, especially those that would stabilize or reduce carbon emissions by taxing fossil fuels."

there is no convincing evidence that future increases in greenhouse gas concentrations will produce significant climatic effects."

Part of the GCC's mandate was preventing and weakening climate policies, both domestically and internationally. The coalition's 1994/1995 communications plan (**Document 37**) outlined a strategy to frame climate policy as economically harmful by ensuring that members of Congress began "hearing their constituents' concerns about a future that could include significantly higher energy costs, major changes in lifestyles, threats to livelihoods, and anti-competitive international trade practices." The communications plan also described how the front group intended to undermine international agreements, equipping "foreign-based reporters" who were likely to attend meetings with "appropriate" background materials and enlisting "sympathetic business organizations" to amplify industry perspectives at the negotiations.

Materials designed for the public and distributed at major international climate meetings include the GCC's 1995 *Climate Change: Your Passport to the Facts* (**Document 38**), which returned again and again to the idea of scientific uncertainty. Following the oil majors' established strategy, the front group sought to limit public support for climate action by presenting global warming as a debate rather than an established fact. The 1995 pamphlet dismissed the idea of a scientific consensus, presented climate modeling as unreliable, and downplayed the connection between global warming and extreme weather events. The document was targeted at undermining international climate policy, a purpose that was made clear with its final included **"FACT: No evidence exists to compel nations to make additional commitments to emissions reductions for the post-2000 period."**

A small but vocal group of scientists who rejected anthropogenic global warming in favor of alternative explanations for climate change became the basis for much of the GCC's climate denial. A 1993 pamphlet titled *What the Experts Say About Global Climate Change* (**Document 39**), for example, cited various climate deniers in support of its assertion that "growing uncertainty among



Document 38:
Global Climate Coalition
Pamphlet, *Climate Change: Your Passport to the Facts*

scientists” on the potential catastrophic effects of global warming made regulation premature. Richard Lindzen, a professor at the Massachusetts Institute of Technology (MIT), was quoted as saying that **“the possibility of large warming, while not disproven, is also without a meaningful scientific basis.”** Arizona State University geographer Robert Balling similarly dismissed the validity of model predictions, concluding that “the global temperature record provides little support for the catastrophic view of the greenhouse effect.” Although these views were extreme outliers within the scientific community, the GCC used them to validate the idea that “climate scientists now largely discount predictions of drastic warming.”

In 1995, the GCC attempted to add legitimacy to their efforts to undermine the scientific consensus by contracting with meteorology firm AccuWeather to produce “Changing Weather? Facts and Fallacies About Climate Change” (**Document 40**). The report argued that “despite increase[d] concentrations of carbon dioxide and other greenhouse gases in the atmosphere, the Earth’s climate has not warmed significantly.” Because of the delayed CO₂ effect, the authors were able to justify the idea that observable warming “may be no more than normal climatic [sic] variation.” But from the claim that observable warming could not yet be definitely attributed to human activity, the report — which itself cited climate deniers like Lindzen and the University of Virginia’s Patrick Michaels — went on to dismiss anthropogenic climate change altogether: “Put briefly, while climate does change, man’s activities do not appear to be a significant agent of change.”

Internally, the coalition affirmed the very scientific consensus it sought to publicly discredit. A 1995 draft primer titled “Predicting Future Climate Change” (**Document 41**), which conceded that the scientific basis for anthropogenic global warming was “well established and cannot be denied,” was shared with members of the GCC Science and Technology Assessment Committee (STAC) by Lenny Bernstein, a scientist at Mobil. The draft primer discussed various contrarian theories — including those of scientists that the GCC had previously cited — before describing in detail the weaknesses of each. While the denialists’ arguments “raise interesting questions about our total understanding of climate processes,” the draft explained, “they do not offer convincing arguments against the conventional model of greenhouse gas emission-induced climate change.”

Acknowledgements of climate science that would have undermined the GCC’s previous claims were not included in the final version of the above “Predicting Future Climate Change” primer. According to minutes from a February 1996 GCC STAC committee meeting (**Document 42**), the draft was altered to downplay scientific certainty and to remove the discussion of contrarian theories

/// they do not offer convincing arguments against the conventional model of greenhouse gas emission-induced climate change.”

Results:

GCC has successfully turned the tide on press coverage of global climate change science, effectively countering the eco-catastrophe message and asserting the lack of scientific consensus on global warming.

altogether. The language throughout the primer was softened, with terms such as “predict” being replaced with words such as “project” or “estimate.” The primer’s conclusion was similarly shortened and reframed. Whereas the original draft outlined the potential for improved models to assess human impacts and noted that future climate changes could provide proof of anthropogenic effects, the version that was approved by the GCC committee members merely stated that claims of significant human impacts “seem unsubstantiated given the many limitations and uncertainties” in the evidence.

Document 44:
E. Bruce Harrison One-Pager,
“Case Histories: Media
Relations for The Global
Climate Coalition”

Dismissing the scientific consensus allowed the GCC to downplay the urgency of addressing climate change. It framed global warming as a problem that would be difficult and expensive to address in the present but become easier and less expensive with time. In *Issues & Options: Potential Global Climate Change* (**Document 43**), published in 1994, the front group argued that **“the cost of introducing constraints today would be substantial and immediate,” while “[t]he cost of inaction is very speculative and remote in time.”** Technological advances, in the GCC’s telling, would only magnify this effect: “The potential for low-cost technological breakthroughs over the next half century could make a nation regret taking premature and expensive actions in the near term.” The group even touted that advances in technologies such as geo-engineering and carbon sequestration “might allow continued use of fossil fuels but with significantly lower emissions of CO₂.”

Within just a few years, the GCC’s communications strategy had already proven to be effective at sowing doubt about the scientific consensus on climate change. As its communications consultant E. Bruce Harrison explained in a case study on the organization (**Document 44**), the coalition’s strategy revolved around pushing two primary messages: first, that the science was not settled enough to justify drastic action, and second, that “regardless of science,” climate policies must be judged by their economic costs. The GCC’s “aggressive campaign” was deemed a rousing success. Harrison explained that the program had

“successfully turned the tide on press coverage of global climate change science, effectively countering the eco-catastrophe message and asserting the lack of scientific consensus on global warming.” The GCC had avoided the adoption of strict national energy taxes and “influenced the administration’s decision to rely on voluntary (rather than mandatory) measures to reduce greenhouse gas emissions in its Climate Change Action Plan,” according to Harrison.

// GCC has successfully turned the tide on press coverage of global climate change science, effectively countering the eco-catastrophe message and asserting the lack of scientific consensus on global warming.”

1 See [Document 10](#): Exxon Memo from Roger Cohen and Duane Levine, Summarizing Climate Modeling and CO₂ Greenhouse Effect Research.

CHAPTER 6

A “DISCERNABLE HUMAN INFLUENCE”: DEVELOPING A COLLECTIVE RESPONSE (1997–1999)

CO₂
368.54ppm
↑
363.88ppm

The fossil fuel industry faced an unprecedented two-pronged challenge as the twentieth century came to a close. In 1995, the Intergovernmental Panel on Climate Change (IPCC) declared that there was a “discernable human influence on global climate.” Two years later, nearly 200 countries agreed to binding emissions reductions when they adopted the Kyoto Protocol. Facing these two challenges to their existing strategy of denial, the fossil fuel industry found itself fragmented over how to respond. While some companies continued to engage in outright climate denial and obstruction, others softened their approach to various degrees; several elements within the industry increasingly attempted to protect their interests by portraying themselves as responsible actors who were proactively responding to the threat of climate change. Across this spectrum of positions, however, there was broad agreement that public concern over climate change threatened to fundamentally alter the future of the fossil fuel industry. In the aftermath of the IPCC’s determination and the most significant step toward international climate policy to date, oil and gas companies uniformly responded by downplaying the scientific consensus and advocating against binding emissions reductions measures that would restrict fossil fuel use, coming together to defend their shared reputation and protect the industry’s collective social license to operate.

The moment the fossil fuel industry had anticipated for decades finally arrived in 1995 with the publication of the IPCC’s Second Assessment Report, which confirmed that human activity was undeniably altering the climate. Shortly after, oil majors Shell and BP pivoted their strategy away from denying climate change outright to warily acknowledging it as a threat that required cautious action. Shell executive Mark Moody-Stuart warned in 1996 that **the industry “did itself no good by trying to pour scorn on the concept” of climate change or “deny its plausibility” altogether**, in a tacit admission of denial.¹

The following year, Shell President Cor Herkströter announced that despite what he called “many remaining uncertainties,” the company now supported “prudent precautionary action.”² Not to be outdone, newly appointed BP CEO John Browne delivered a highly-publicized speech at Stanford University **(Document 45)** announcing a similar repositioning just a few months later. Browne acknowledged that there was “now an effective consensus ... that there is a discernible human influence on the climate.” Despite the significance of the acknowledgement, Browne’s speech was light on tangible recommendations to address climate change — he maintained that “dramatic, sudden and surely wrong” action that might restrict emissions or “ban the use of fossil fuels” would be a mistake. Browne argued instead for a gradualist approach as “there remain large elements of uncertainty - about cause and effect ... and even more importantly about the consequences.”



Photo: C-SPAN

John Browne, Group Chief Executive of BP from 1995 to 2007

While reflecting on this time period in 2004, John Browne recalled how “[m]any people in the oil and gas industry held a different view” from BP and Shell. “They were not convinced by the science and they argued that in the absence of certainty nothing should be done.”³ American Petroleum Institute (API) Executive Vice President and Global Climate Coalition (GCC) Chairman William O’Keefe’s 1997 testimony before Congress **(Document 46)** reflected this opposing view, rejecting the idea that the science justified urgent action, and warning Congress against adopting binding carbon regulations ahead of the approaching United Nations Framework Convention on Climate Change (UNFCCC) negotiations in Kyoto, Japan. Climate change “does not represent a crisis requiring precipitous and dramatic actions to prevent an imminent ecological catastrophe,” he declared, because “we have time to address these uncertainties.” O’Keefe went on to claim — again directly contradicting the industry’s own scientific research — that “[n]othing we do in the next 20 years will have any appreciable impact on the world’s average temperature in 2050 or 2100.” However, his testimony revealed the first slight signs of a public shift in API’s own stance on climate change. O’Keefe conceded that it would be “imprudent” to assume there was no problem, since climate change could have serious consequences “in either direction.”⁴ The core of his testimony, however, stuck to the hardline industry script: “scientific uncertainties abound.”

Exxon CEO and API Chairman Lee Raymond echoed much of O’Keefe’s sentiment in a speech at the 1997 World Petroleum Congress in Beijing **(Document 47)**. There, Raymond argued that drastically curtailing fossil fuel use “for environmental reasons” was “neither prudent nor practical,” and that the “need [for climate policy] has yet to be proven.” Instead, he advocated for “increasing, not curtailing, the use of fossil fuels” since economic growth was “the real secret to environmental improvement.” Fossil fuels would continue to supply most of the

“ there remain large elements of uncertainty - about cause and effect ... and even more importantly about the consequences.”

“ [n]othing we do in the next 20 years will have any appreciable impact on the world’s average temperature in 2050 or 2100.”

of consensus from independent and industry scientists alike. Mobil claimed that “committing to binding targets and timetables now will alter today’s lifestyles and tomorrow’s living standards” while insisting that it would support “realistic policies” in the future once “better science” had emerged.

Despite the industry’s best efforts, the international community adopted a legally-binding treaty to reduce greenhouse gas emissions — the Kyoto Protocol. Two months after the negotiations, as the industry now faced the new reality of mandatory carbon regulations, Chevron executive Richard Matzke expanded upon Kenneth Derr’s earlier calls for the industry to shore up its collective reputation in the face of “unique challenges,” such as climate change. He implored fellow industry members at an energy policy conference (**Document 50**) to recognize their shared interests: despite the “full range of public positions taken by different companies” on climate change, “worldwide criticism of the entire fossil fuels industry” would continue regardless, making it essential to protect “our shared, total worldwide reputation as an industry.” If companies could reposition themselves as responsible actors, he argued, then “world leaders concerned about climate change will take a more balanced perspective on regulating our business.” In other words, improving the industry’s collective reputation could translate directly into more favorable regulatory treatment.

Shell, while formally acknowledging the scientific consensus and advocating for “prudent” climate action since early 1997, continued to emphasize uncertainty in subsequent public materials and stress the need for continued fossil fuel production. In 1998, the company released a report titled *Climate Change: What does Shell think and do about it?* (**Document 51**), which admitted that “at the very least, mankind is carrying out a risky experiment with the planet by raising the levels of greenhouse gases in the atmosphere to levels far above any seen in the last 150,000 years or more.” But it went on to undermine concerns about those unprecedented changes by claiming ignorance about the likely outcomes: “We don’t know whether this will be catastrophic, or whether it might on balance be slightly beneficial.” The report explained that, while it was “clearly prudent” to develop alternative energy, improve efficiency, and reduce the environmental impact of fossil fuels, Shell was primarily focused on expanding its production of oil and gas. The first listed action under “What is Shell Doing About Climate Change?” was to “continue to produce oil and gas to fuel the next 20–30 years of economic growth ... [which] means Shell companies have to continue to find more reserves.”

That same year, Shell released its first sustainability report, *Profits and Principles – does there have to be a choice?* (**Document 52**), a document explicitly framed as a reputational exercise and dialogue with stakeholders. The report reiterated

at the very least, mankind is carrying out a risky experiment with the planet by raising the levels of greenhouse gases in the atmosphere to levels far above any seen in the last 150,000 years or more”

Shell's new position on climate change while still stressing that hydrocarbon production would remain essential for the foreseeable future. It tried to reconcile the two, arguing that, in fact, "[a]ll the world's estimated resources of conventional oil and gas could be consumed without raising atmospheric carbon concentrations above the limits suggested by even the most pessimistic observers." And even as it declared that "[r]enewables are now one of our core areas of business and demonstrate our intention to invest in areas of sustainable growth," it sowed doubt about their viability, cautioning that solar power would need to become "five times less expensive" to compete and that renewables were "not totally free from environmental and social impacts."

As Shell focused on improving its public reputation by engaging with the idea of climate change, its confidential internal "Group Scenarios 1998-2020" report from the same year (**Document 53**) explored a potential future in which Shell would face a reckoning once climate impacts became increasingly apparent to the public. Under one scenario in which a "series of violent storms causes extensive damage" to the U.S. East Coast, Shell anticipated that public sentiments could shift firmly toward environmental action, resulting in a "coalition of environmental NGOs bring[ing] a class-action lawsuit 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." Shell envisioned a world of escalating direct action, boycotts, and "vigilante environmentalists," likening the backlash to the earlier social turn against Big Tobacco, with young consumers at the forefront of demanding accountability. Shell was not simply speculating about the consequences of abstract reputational risk; this report revealed that Shell feared its long-standing climate deception could eventually trigger litigation, public outrage, and a legitimacy crisis once measurable climate damages were fully underway.

Despite the fossil fuel industry's recognition of the possible consequences if the public learned of its long-standing deception, it increased its coordinated efforts to undermine the science and convince the public and policymakers that mandatory emissions reductions would cause more harm than good. In the months following the adoption of the Kyoto Protocol, API developed and shared with industry executives a confidential "Coordinated Climate Change Strategy and Action Plan" (**Document 54**). The plan argued that the oil industry had to act together, and with urgency, to convince Congress, the media, and the American public that the Kyoto Protocol was "fundamentally flawed and harmful to the American economy" as part of a strategy "to counter federal and state efforts to implement climate action plans." To do so, rather than calling for the fossil fuel companies themselves to undermine climate action, the plan detailed how it would outsource such efforts to think tanks and academic researchers, placing

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."

Victory Will Be Achieved When

- Average citizens “understand” (recognize) uncertainties in climate science; recognition of uncertainties becomes part of the “conventional wisdom”
- Media “understands” (recognizes) uncertainties in climate science.
- Media coverage reflects balance on climate science and recognition of the validity of viewpoints that challenge the current “conventional wisdom”
- Industry senior leadership understands uncertainties in climate science, making them stronger ambassadors to those who shape climate policy
- Those promoting the Kyoto treaty on the basis of extant science appear to be out of touch with reality.

industry-friendly scientists in IPCC review processes, and spending dedicated funds to argue that renewables could not meaningfully replace fossil fuels in the near term.

Document 55:
API Draft “Global Climate Science Communications Action Plan”

Just two months after the trade organization circulated its post-Kyoto action plan, API public relations representative Joe Walker shared a draft “Global Climate Science Communications Action Plan” (**Document 55**) with a group composed of representatives from Exxon, Chevron, and Southern Company, among others. This group, called the “Global Climate Science Communications Team,” developed the plan “to inform the American public that science does not support the precipitous actions Kyoto would dictate,” and made no attempt to obscure its main objective to halt climate action altogether. **“Victory will be achieved,” the plan stated, when uncertainty in climate science became embedded into the “conventional wisdom,”** media coverage treated scientific doubt as balanced and legitimate, and those supporting climate action “appear to be out of touch with reality.” Echoing API’s earlier coordinated climate action strategy, the plan outlined how the team intended to recruit and train “independent” scientists for media outreach, channel deception efforts through think tanks and front groups, and launch advertising campaigns to spread doubt about the science that their own researchers had validated over the past two decades. The plan even discussed how it would target schools, developing materials to shape the views of teachers and students alike in order to “erect a barrier against further efforts to impose Kyoto-like measures in the future.”

The draft “Global Climate Science Communications Action Plan” was leaked to

The New York Times within weeks of its proposal,⁶ compelling API's Joe Walker to distribute internal media talking points on how to navigate the resulting publicity crisis (**Document 56**). Even as API tried to distance itself from the leaked plan, calling it an unauthorized result of "brainstorming sessions by persons involved in the global climate change debate," the talking points defended the motives behind it. API explained that the group's discussions revolved around **"how to reinvigorate the debate regarding the issue that the science is not conclusive on global warming"** in direct response to "statements made by the Clinton Administration, environmental groups and reports in the news media asserting that global warming is a reality."

After the dust settled from its public relations crisis, API began to lay out how the industry should approach climate change in the new millennium. A 1999 internal API budget planning document for the year 2000, titled "Strategic Issue – Climate Change" (**Document 57**), reiterated how climate change continued to be "at the center of industry's business interests," because any "[p]olicies limiting carbon emissions reduce petroleum product use." And likewise to its 1998 "Coordinated Climate Change Strategy and Action Plan" and the Global Climate Science Communications Team's draft plan, API's year 2000 budget document outlined a strategy to more closely coordinate with a familiar roster of industry-aligned think tanks and advocacy groups to shape policy debates and public opinion. However, this plan included a new initiative that differed from previous strategies: "Emphasize industry's positive role and actions." In particular, "[e]stablish that responsible action is not synonymous with the Kyoto Protocol." Major elements of this new approach consisted of developing and delivering "positive industry messages," establishing voluntary greenhouse gas reduction programs and efforts, creating a standardized industry greenhouse gas accounting and reporting methodology, and distributing more communications materials. This added dimension to the plan was designed as an "alternative" long-term approach to "near-term targets and timetables," and would allow industry to portray itself as 'part of the solution' to climate change, even as it continued to advocate against binding carbon regulations and had no plans to reduce fossil fuel production. Such voluntary, "responsible action" could serve as evidence that they were good-faith partners in the effort to address climate change — a strategy the industry would increasingly employ entering into the new millennium as a warming world became ever more undeniable. However, behind the scenes, API continued to fund and develop the ever-growing third-party deception network to carry out the industry's dirty work when the companies no longer could, lest their social license to operate become compromised.

Emphasize industry's positive role and actions."

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- 3 John Browne, "Leadership," transcript of speech delivered in London, October 18, 2004, Internet Archive, <https://web.archive.org/web/20041204231552/http://www.bp.com/genericarticle.do?categoryId=98&contentId=7001544>.
- 4 Original emphasis.
- 5 Original emphasis.
- 6 John H. Cushman Jr., "Industrial Group Plans to Battle Climate Treaty," *New York Times*, April 26, 1998, <https://www.nytimes.com/1998/04/26/us/industrial-group-plans-to-battle-climate-treaty.html>.

CHAPTER 7

"A NEW TYPE OF ENERGY COMPANY": THE FALLACY OF A SUSTAINABLE FOSSIL FUEL INDUSTRY (2001–2006)

CO₂
382.09ppm
↑
371.32ppm

As the twenty-first century began, the fossil fuel industry fully embraced a strategy that would define its climate deception for decades to come. Oil and gas companies introduced additional buffers between themselves and blatant climate denialism, positioning themselves as responsible actors addressing climate change even as they ramped up fossil fuel production. The industry downplayed the viability of renewables and a rapid energy transition while framing continued fossil fuel use as sustainable, arguing that voluntary measures and nascent technologies such as carbon capture and storage (CCS) could act as effective alternatives to binding emissions reductions. Meanwhile, the industry's sprawling deception network continued to carry out the work of sowing doubt, delaying policy, and interfering with research that brought additional attention to the role of fossil fuels in global warming.

In 2000, BP launched a highly publicized \$200 million rebrand: the third largest oil company in the world¹ would now call itself "Beyond Petroleum." This public relations campaign, crafted by the advertising firm Ogilvy, was one of the clearest illustrations of the fossil fuel industry's reputation-focused pivot. Ogilvy described how its campaign defined BP as a "new type of energy company," one prepared to confront the tension between energy demand and environmental protection.² The following year, in a speech outlining BP's new corporate strategy (**Document 58**), Group Chief Executive John Browne reiterated that climate concerns posed a serious risk to BP. "We can't live in denial or pretend that air quality and global warming aren't real issues," he stated, "particularly since so many of our customers believe them to be real." Still, he found ways to minimize the importance of actually reducing carbon emissions, claiming that "the science of climate change is still provisional" and that there were "no certainties about cause and effect."³

// We can't live in denial or pretend that air quality and global warming aren't real issues... particularly since so many of our customers believe them to be real."

The fossil fuel industry's efforts to obstruct climate action behind the scenes continued even as its public rhetoric evolved. Declassified State Department briefing materials obtained through a FOIA request (**Document 59**) indicate that the Global Climate Coalition (GCC) directly influenced newly-inaugurated President George W. Bush's decision to withdraw the U.S. from the Kyoto Protocol in early 2001. This meant that the world's largest emitter of greenhouse gases became the only country to refuse to join the international climate treaty signed on to by the rest of the world. In confirmation of the front group's win, Under Secretary of State for Global Affairs Paula Dobriansky told representatives from the GCC at a meeting held at the American Petroleum Institute (API)'s headquarters, **"POTUS rejected Kyoto, in part, based on input from you."** One of the meeting's objectives was therefore to "solicit GCC ideas on [an] alternative to Kyoto as part of continuing dialogue with friends and allies." The GCC disbanded early the following year, having successfully used climate denial and skepticism to stop the binding carbon regulations dictated by Kyoto. The "industry voice on climate change has served its purpose by contributing to a new national approach to global warming,"⁴ it declared.

In another bid to covertly influence the U.S. government's engagement with climate action, ExxonMobil urged the Bush administration to replace top U.S. scientists leading work on the Intergovernmental Panel of Climate Change (IPCC)'s Third Assessment Report with outspoken climate skeptics. ExxonMobil lobbyist Randy Randol sent a pointed letter to John Howard of the White House Council on Environmental Quality (**Document 60**) which called for the removal of several senior government climate appointees "from their positions of influence." Randol argued that the U.S. representatives to the IPCC should be adjusted so that "none of the Clinton/Gore proponents are involved in any decisional activities,"⁵ and proposed installing prominent climate skeptics Richard Lindzen and John Christy to lead an "immediate review" of the IPCC working group reports instead. ExxonMobil's efforts were successful: the following year, Lindzen and Christy were each named lead authors of chapters in the IPCC Third Assessment Report, *Climate Change 2001: The Scientific Basis*.⁶

A few months after Randol's letter to the White House, senior ExxonMobil executive Rene Dahan addressed the London Oil & Money Conference in an effort to respond to what he described as confusion and division within the industry over its "approaches to environmental and other public image issues" (**Document 61**). Dahan acknowledged that "the **public** positioning among our companies has differed,"⁷ but suggested that such differences were largely a matter of presentation rather than substance. In line with the rest of industry, Dahan announced that ExxonMobil now supported climate action — even stating that it was "absurd" some accused the company of dictating the U.S.'s position on

the Kyoto Protocol — but argued that alternative approaches should be considered. According to Dahan, there was “ample time” to “consider all our options in a manner that matches the gradually improving scientific understanding of potential climate change” — in contrast with warnings from the company’s own scientists decades earlier. ExxonMobil’s climate strategy, he explained, centered on improving energy efficiency, expanding investment in natural gas, and developing “long-term mega technologies” such as CCS that would preserve the existing fossil fuel economy. Technologies, he strongly reminded his audience, that did not yet exist: **“we need to remember that those new technologies do not exist today and yet they represent the only, I repeat, the only effective long term response to potential climate change.”**⁸

Despite Dahan’s declaration that the idea that ExxonMobil “had great influence over the U.S. administration[s] environmental policies” was a “compliment we simply do not deserve,”⁹ the company again sought to insert skepticism in federal climate efforts in early 2002. A letter from ExxonMobil scientist Brian Flannery to White House advisor John Marburger (**Document 62**) recommended that the U.S. Global Change Research Program (USGCRP) focus on ‘unresolved’ climate science questions, such as whether climate change could be definitively attributed to human activity and how confidently its impacts could be predicted — in direct contrast to conclusions reached by Exxon’s own scientists over twenty years earlier. Flannery also criticized the IPCC process as overly politicized, and recommended total reform, especially its “Summary for Policymakers,” which he claimed overstated the certainty of climate science.

BP mostly eschewed outright policy obstruction and denial, instead working hard to convince investors and the public that continued oil and gas production could be “sustainable” in order to ensure a long-term future for fossil fuels. In a 2003 speech to investors titled “Climate Change” (**Document 63**), BP Group Chief Executive John Browne revisited his 1997 announcement where BP acknowledged the scientific consensus on climate change, expressing that it stemmed from a concern for the “long term sustainability of what we do.” He was quick to note, however, that his vision of sustainability was defined by the ability “to continue to sustain our core activity - applying our skills and experience to produce and develop hydrocarbons.” Three years after the company’s high-profile rebrand to “Beyond Petroleum,” Browne argued that BP and “many other companies” had gained confidence both that business could play a “positive role” in addressing climate change, and that “the future of oil and gas is secure and sustainable.” Browne focused on how BP could turn the “threat” and “risk” of climate change “into an opportunity,” not by investing in an energy transition, but instead “by supplying oil and gas and related products in a sustainable manner.” In an interview with the *Wall Street Journal*, when asked if “Beyond

“The actual or perceived consequences of human activity on the global climate - what is generally called climate change - matter to BP because we’re interested in the long term sustainability of what we do. We want to be able to continue to sustain our core activity - applying our skills and experience to produce and develop hydrocarbons.”

Petroleum” ran the risk of setting up the company for future disappointment with the public, Browne clarified that “we just have to be careful to point out that it is not a literal statement. We are not getting out of the petroleum industry.”¹⁰

Even ExxonMobil began to embrace the rhetoric of the energy transition — while doubling down on fossil fuels. In February 2006, the company released *Tomorrow’s Energy: A Perspective on Energy Trends, Greenhouse Gas Emissions and Future Energy Options*,¹¹ a report intended to outline its views on and ventures in future energy demand, climate risks, and emerging technologies. Despite the report’s title, ExxonMobil continued to emphasize uncertainty in climate science, downplay the scientific consensus and conclusions made by the IPCC, discount the viability of renewables, and argue the need for continued fossil fuel production into the foreseeable future. *Tomorrow’s Energy* was so out of step with established climate science that it drew sharp criticism from The Royal Society, the U.K.’s national academy of sciences, whose representative Bob Ward wrote to Esso (ExxonMobil) in the fall of 2006 (**Document 64**) to express “disappointment at the inaccurate and misleading view of the science” in the report. Ward also called attention to the oil major’s funding of over three dozen third-party organizations¹² that misrepresented climate science by denying evidence, exaggerating uncertainty, or downplaying risks of climate change.

ExxonMobil’s response pushed back forcefully, accusing The Royal Society of mischaracterizing the company’s approach to climate change and arguing that disagreement was a normal and necessary part of scientific debate. But in fact, the company was actively engaging with climate denialist organizations to counter domestic environmental policy concerns at the same time. In mid-2006, representatives from ExxonMobil participated in a “Strategic Discussion Regarding the Clean Air Act” (**Document 65**), which was sponsored by conservative libertarian think tank The Heartland Institute and hosted by the public relations firm DCI Group. “Expected outputs” for the meeting, which was intended to “address legislative concerns” on the horizon, included “ideas for white papers, identifying opportunities for testimony, outlining educational forums for elected officials, and determining a communication strategy for media.” The event’s invitation shows six ExxonMobil staff listed in attendance alongside representatives from a number of prominent climate deniers from organizations including the Competitive Enterprise Institute/Cooler Heads Coalition,¹³ American Enterprise Institute,¹⁴ Marshall Institute,¹⁵ Frontiers of Freedom,¹⁶ Tech Central Station,¹⁷ American Legislative Exchange Council,¹⁸ Science and Environmental Policy Project,¹⁹ and Cato Institute,²⁰ among others.

// We are not getting out of the petroleum industry.”

Even though ExxonMobil later pledged to stop its contributions to climate denialist organizations in its *2007 Corporate Citizenship Report*,²¹ it continued to fund these groups and others into the next decade.²²

Shell similarly sought to appear that it was being proactive on climate while ensuring continued dependence on fossil fuels. A 2006 case study on the company published by the Pew Center on Global Climate Change (**Document 66**), tellingly titled “Maintaining a Seat at the Table,” explained that Shell’s actions on climate change built “credibility and a powerful voice within policy, advocacy and market circles,” allowing it to help shape emerging carbon regulation that would impact its business. As a result, taking a position of ‘responsible’ action on climate change created “opportunity in terms of building brand and reputation” for the company. In the words of Shell’s chief climate change advisor, David Hone, the overarching goal was “[s]ecuring Shell’s future by seizing opportunities that arise from the climate change issue.” But since Shell had actually found “that some renewables clash with the existing business model,” the case study explained, the company would instead seek to make “its core business—fossil fuels—succeed in a carbon-constrained world.” Hone acknowledged that **while the company would eventually “have to get out of fossil fuels,” such a transition was “almost certainly many decades away.”** Shell, Hone explained, was “not going to get out of the oil business in the near term.”

That same year, Shell CEO Jeroen Van der Veer gave his answer to how Shell could “succeed in a carbon-constrained world” by outlining his vision for what he called “green fossil fuels” in London’s *Financial Times* (**Document 67**). Despite Van der Veer’s acknowledgement that **“[m]any scientists agree that emissions from human activities are changing our climate and call for urgent action,”** he reiterated that Shell had no intentions to reduce hydrocarbon production or pivot rapidly to alternatives. Instead, he argued that fossil fuels themselves could actually be made “green” by capturing and storing their emissions. Though CCS technology had not yet proven capable of the economic, scalable implementation necessary for mitigating emissions to safe levels, Van der Veer suggested that in the medium term this approach could be “cheaper, more convenient and more flexible than alternative energies.” Rather than invest in the energy transition, Shell promoted nascent, unproven technologies to enable the continued use of fossil fuels — even as the industry, and Shell itself, had long understood that a rapid transition to a renewable energy system was essential to avoid future catastrophic climate change.



Jeroen Van der Veer,
Chief Executive Officer of
Shell from 2004 to 2009

Photo: “Jeroen van der Veer - World Economic Forum Annual Meeting Davos 2009” by [World Economic Forum](#)

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CHAPTER 8

FALSE SOLUTIONS: CARBON CAPTURE, NATURAL GAS, AND THE TECHNOLOGIES OF DELAY (2006–2014)

CO₂
398.81ppm
↑
382.09ppm

Just a few years into the new millennium, barely removed from the industry's most blatant climate denial, the oil majors increasingly sought to present themselves as 'part of the solution' to the climate crisis. Rather than explicitly disputing the existence of fossil-fuel-driven climate change, oil and gas companies now focused on defining a narrow range of acceptable responses to it. They placed particular emphasis on carbon capture and storage (CCS) and natural gas, both of which provided the illusion that fossil fuel companies were voluntarily addressing emissions while actually preserving the energy system that was at the root of the climate crisis. Even as industry executives increasingly acknowledged that climate change was real, they overlooked the readily apparent limitations of their proposed solutions while dismissing the viability of the large-scale deployment of renewables. The long arc of an energy transition — once an argument for rapid action — became the industry's justification for half-measures and a delayed shift away from fossil fuels. The industry's position on climate change increasingly solidified: the companies accepted the problem and claimed to offer definitive solutions, yet remained fundamentally committed to preserving fossil fuels as the foundation of the energy system. All the while, trade associations, front groups, allied organizations, and other industry-funded voices continued engaging in the dirty work of outright climate obstruction on behalf of the industry: challenging regulations, opposing policies that threatened fossil fuel demand, and shaping public perceptions of both climate science and potential policy and technical solutions.

The 2006 American Petroleum Institute (API) *Climate Challenge and Progress Report* (**Document 68**) attempted to rewrite the industry's history of denialism, claiming that "America's oil and natural gas companies have long considered the potential climate impacts of energy use an important environmental challenge." API sought to portray oil and gas companies as responsible actors, highlighting the industry's voluntary efforts to reduce emissions, improve efficiency, conduct

climate research, and develop new technologies. The trade organization also promoted natural gas as a practical way to lower carbon emissions without moving away from fossil fuels and presented CCS as a technology that could limit greenhouse gas emissions while fossil fuels continued to supply much of the world's energy for decades to come. Rather than preparing for a transition away from hydrocarbons, the industry was working to present natural gas, a fossil fuel, and CCS, an unproven and yet-to-be-scaled technology, as the mechanisms through which fossil fuels could maintain their position in the energy mix in an increasingly warming world.

While continuing to present itself as one of the industry's more climate-conscious majors, Shell focused its public messaging on explaining why a rapid transition away from fossil fuels was unrealistic. In 2007, CEO Jeroen Van der Veer articulated what he called Shell's "hard truths" position on energy, arguing that the widespread belief that renewables would replace most fossil fuels by mid-century rested on assumptions about technological breakthroughs that might never materialize.¹ Ironically, the company's answer to this problem was promoting a different technology that had even more obstacles to reducing emissions at scale: carbon capture and storage. "Many companies in our industry are grappling with how to continue meeting ... escalating demand for energy as glaciers melt and CO₂ limits get tighter," observed Shell Director of Corporate Affairs Roxanne Decyk in a 2008 speech (**Document 69**). She argued that CCS could not only help mitigate the risks posed by climate change, but also **the threat of "social backlash against our fossil-based products if we aren't clearly helping to bring emissions under control."** Oil and gas companies like Shell promoted nascent technologies such as CCS with the understanding that it could preserve the industry's license to operate and serve as a counter to the sentiment that fossil fuel use was inherently at odds with action on climate change.

In a 2009 speech titled "Energy Security: Taking the Long View" (**Document 70**), Chevron Chairman and CEO David O'Reilly similarly argued that society needed to be "realistic" about what renewable energy could achieve, arguing that **"we will need to rely on traditional fuels for quite some time to come."** Even as he acknowledged that **"burning fossil fuels can carry a cost to the world, including to the climate of the Earth itself,"** O'Reilly argued against a rapid energy transition, contending that it would be dangerous to let "energy promises get ahead of energy realities." O'Reilly suggested that undefined future technological breakthroughs would be the key to addressing climate change: "In the end, we'll succeed through technologies not yet developed nor perhaps even fully imagined. As always, when the conditions are right, there will be those moments of genius that solve old problems and clear new paths." The industry's



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David O'Reilly, Chairman and Chief Executive Officer of Chevron from 2000 to 2009 and API Chairman in the early 2000s

Photo: "David O'Reilly - World Economic Forum Annual Meeting Davos 2008" by World Economic Forum

techno-optimism focused almost entirely on technologies that would perpetuate fossil fuel use and was built on a false narrative designed to undermine the feasibility of renewables.

Later that same year, Shell's newly appointed CEO, Peter Voser, advanced a more clearly defined vision of what that future should look like in a speech at the Energy Institute in London (**Document 71**). Like O'Reilly, Voser insisted that "alternative sources of energy will not by themselves deliver a secure, affordable and sustainable energy supply by mid-century." Citing Shell's projection that renewables would make up around 30 percent of the energy mix by that time, Voser argued that **"we cannot address climate change through renewable energy alone. We simply don't have the time." Instead, what he called "[c]leaner fossil fuels" would need to "shoulder a large part of the burden."** Rather than viewing the urgency of the issue as a reason to accelerate the transition to renewables, Voser presented it as a justification for relying even more heavily on natural gas and attempting to scale CCS. By the end of the speech, Shell's vision for a "new energy system" looked less like a departure from the old fossil fuel driven system and more like a plan to preserve the fossil economy, with natural gas serving as the fuel that "connects all the dots" throughout the transition.

BP executive Steve Westwell delivered a remarkably similar message at the 2011 International Conference on Low Carbon Energy and Climate Change (**Document 72**), promoting CCS and natural gas under the pretense that these measures would somehow reconcile rising fossil fuel production with a stable climate. Westwell praised natural gas as "the cleanest burning fossil fuel" and highlighted how advances in hydraulic fracturing had unlocked enough resources to potentially supply another century of demand. He openly acknowledged the growing gap between climate goals and reality, but informed his audience that **"the bulk of BP's investments over this period will continue to be directed towards oil and gas,"** with renewables as "complementary investments" rather than replacements. Westwell also pointed to CCS as a key climate solution even as he acknowledged the technology's significant engineering, regulatory, policy, and social challenges and limitations.

The misalignment between the industry's claims about the need for action and its continued rejection of renewables in favor of fossil fuels continued when BP Chairman Carl-Henric Svanberg spoke during Nobel Week in 2013 (**Document 73**). "We need to move as fast as we can as time is not on our side," Svanberg declared. Like former BP CEO John Browne, Svanberg acknowledged that "[w]e can't pretend ... that climate change is not a serious issue." But, he continued, "neither can we pretend that renewables are the only solution, or that



Photo: BP

Carl-Henric Svanberg,
Chairman of BP from
2010 to 2018

/// We can't pretend, for example, that climate change is not a serious issue. But neither can we pretend that renewables are the only solution..."

they are available at scale today.” Svanberg’s proposed solution was natural gas, which he described as “the fastest-growing fossil fuel, and the cleanest.” Long after BP had publicly acknowledged the scientific consensus on anthropogenic global warming, the company continued to advocate doubling down on fossil fuel expansion as the only practical way forward.

Despite the industry’s best efforts to position fossil fuels as solutions for climate change rather than the cause of it, calls to divest holdings from oil and gas producers became sufficiently widespread to earn a response from ExxonMobil Vice President of Public and Government Affairs Ken Cohen in late 2014. Two posts published to the company’s *Perspectives* blog (**Document 74**) rebuked the divestment movement, calling it “out of step with reality” and “morally problematic.” While Cohen admitted that climate change does pose “significant risks to society and ecosystems,” he downplayed the viability of a future renewable energy system, and argued that divestment from fossil fuels actually diverts attention away from technological “solutions” that could mitigate climate risks. He included examples of such “solutions,” citing the “industry-driven natural-gas boom” as “Exhibit A.” Cohen also talked up the potential of CCS, which he remarked could “preserve the value of fossil fuels in a carbon-constrained world.”

Behind the scenes, the fossil fuel industry’s long-running efforts to undermine climate science and obstruct climate policy carried on. After it received criticism from the Royal Society in the mid-2000s, ExxonMobil stated in its *2007 Corporate Citizenship Report* that it would discontinue funding for several groups that had engaged in climate denialism.² Public statements aside, the company continued funding third-party climate naysayers, including supporting denier Willie Soon’s speculative research on alternative causes of global warming from at least 2008 through 2010 (**Document 75**). After his financial connections with ExxonMobil, Koch Industries, API, and Southern Company came to light several years later through a series of FOIA requests, it was revealed that Soon had promised peer-reviewed journal articles as “deliverables” and had failed to disclose his fossil fuel industry funding — upwards of one million dollars over a period of several years — in various published papers.³ Noted climate denier Patrick Michaels admitted in a 2010 *CNN* interview that roughly 40 percent of his research funding also came from the oil industry.⁴

Fossil fuel companies became more creative in their strategies to influence public opinion, increasingly utilizing front groups to do the dirty work of attacking the industry’s critics without directly implicating the companies themselves. In 2009, for example, the Independent Petroleum Association of America (IPAA) and FTI Consulting launched Energy in Depth (EID), a strategic communications project intended to “combat new environmental regulations.”⁵ Although EID

described itself as “a project of America’s small, independent oil and natural gas producers,”⁶ it was covertly sponsored from its inception by BP, Chevron, Shell, API, and XTO Energy (ExxonMobil), among others.⁷ In a technical paper about the project presented at an industry conference in 2014 (**Document 76**), two FTI employees explained that EID had successfully **“protected and preserved the social, political and regulatory license to operate of many oil and gas producers.”** Among the project’s key roles, FTI explained, was to “interact, educate and assist reporters” and “leverag[e] those relationships with an eye on meaningfully affecting the way issues important and relevant to its members are reported by the media.” Campaigns like EID provided unique value for the industry, according to the paper, because of their **“ability to say, do and write things that individual company employees cannot and should not.”**

Astroturf groups also proved to be an effective tool in shaping public opinion without directly implicating oil and gas producers. A leaked 2014 presentation from the Western States Petroleum Association (WSPA) (**Document 77**) outlined a series of organizations and coalitions that the trade organization had “activated” throughout the year to respond to what it described as “aggressive anti-oil initiatives.” These groups, with names like “California Fuel Facts,” “Californians for Affordable & Reliable Energy,” and “California Drivers Alliance,” created the appearance of broad, grassroots opposition to environmental regulations. WSPA was aware that these tactics were increasingly coming under public scrutiny; among its slides was a screenshot of an article headline that read, “How Big Oil is using front groups to attack global warming regulations.” The industry’s approach to climate change had fully evolved into a two-track system: publicly promoting carbon capture, natural gas, and voluntary action as evidence that fossil fuel companies could be ‘part of the solution,’ while simultaneously funding surrogates and front groups that could organize opposition to policies that threatened future fossil fuel production and consumption.

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- 1 Jeroen Van der Veer, “High Hopes and Hard Truths Dictate Future,” *The Times*, June 25, 2007, <https://www.thetimes.com/uk/environment/article/high-hopes-and-hard-truths-dictate-future-rpw6tst0lfb>. Also see article on Shell’s website: https://web.archive.org/web/20071025013132/http://www.shell.com/home/Framework?siteId=media-en&FC2=/media-en/html/iwgen/leftnavs/zzz_lhn5_0_0.html&FC3=/media-en/html/iwgen/news_and_library/speeches/2007/jvdv_article_high_hopes_25062007.html.
 - 2 ExxonMobil, *2007 Corporate Citizenship Report*, corporate report, 2008, DocumentCloud, <https://www.documentcloud.org/documents/2799777-ExxonMobil-2007-Corporate-Citizenship-Report/>.
 - 3 Justin Gillis and John Schwartz, “Deeper Ties to Corporate Cash for Doubtful Climate Researcher,” *The New York Times*, February 21, 2015, <https://www.nytimes.com/2015/02/22/us/ties-to-corporate-cash-for-climate-change-researcher-Wei-Hock-Soon.html>.
 - 4 CNN, “Money Troubles: How to Kick-Start the Economy; Wild Weather Evidence of Global Warming?,” *Fareed Zakaria GPS*, televised August 15, 2010, CNN Transcripts, <https://transcripts.cnn.com/show/fzgps/date/2010-08-15/segment/01>. See video of interview here: “2010 Michaels CNN Interview Admitting Funding from Oil,” Climate Files, accessed August 7, 2026, includes YouTube video and partial transcript of CNN interview by Fareed Zakaria, <https://www.climatefiles.com/deniers/patrick-michaels-collection/2010-michaels-cnn-interview-oil-funding/>.
 - 5 Independent Petroleum Association of America (IPAA), “Hydraulic Fracturing Under Attack,” association letter, June 5, 2009, DeSmog, <https://www.desmog.com/wp-content/uploads/files/HFUnderFire.pdf>.
 - 6 Energy in Depth, “Contact Us,” webpage, archived June 28, 2009, Internet Archive, <https://web.archive.org/web/20090628222743/https://www.energyindepth.org/about/contact-us/>.
 - 7 IPAA, “Hydraulic Fracturing.”

CHAPTER 9

“AN UNSUSTAINABLE PATH”: DOUBLING DOWN ON FALSE SOLUTIONS POST-PARIS (2015–2019)

CO₂
411.65ppm
↑
401.01ppm

By the mid-2010s, the fossil fuel industry found itself confronting a growing set of existential challenges. The signing of the Paris Agreement in 2015 signaled a new degree of commitment to limiting greenhouse gas emissions on a global scale. Around the same time, a series of journalistic investigations into the industry’s historic climate knowledge and deception brought unprecedented public and legal scrutiny to the fossil fuel industry’s decades of climate deception. As the oil majors continued their public promotion of natural gas and carbon capture and storage (CCS), they were repeatedly confronted by their own experts with the significant limitations of each of their proposed ‘solutions.’ The fundamental contradictions at the heart of the fossil fuel industry’s deceptive claims became harder to ignore with each abandoned commitment and failed initiative. Yet the industry remained committed to its established course: portraying oil and gas companies as indispensable partners in solving climate change while resisting any and all attempts to hold them to it.

Carbon capture and storage continued to hold a unique public relations appeal to fossil fuel companies as a ‘one-size-fits-all’ climate solution — promising to reign in greenhouse gas emissions while permitting the continued use of fossil fuels — even as they internally understood the enormous obstacles standing in the way of scaling the technology. **A BP post on Twitter from 2016 argued that carbon capture “could be vital for stabilising global temps” — alongside the hashtags #ClimateAction and #ParisAgreement.¹** A company Q&A brief created for a student event earlier that year (**Document 78**), however, included a prepared response that more transparently described how CCS might actually fit into the company’s long-term strategy, describing it as “the only known technology that could enable continued large-scale use of fossil fuels in a tightly carbon-limited world.” Still, for all of its potential benefits to the industry, both as a way to continue business as usual and as a purported climate ‘solution,’ the brief explained that BP had decided to reduce its

What is CCS?

BP Confidential

bp

...but it has stalled and faces significant barriers

- CCUS is considered an essential component of the low carbon portfolio needed to meet global climate goals
- Gas-fired power with CCUS provides intermittent low carbon generation to balance intermittency of renewables
- CCUS is the only option for decarbonisation of certain industries and coal
- CCUS is the only technology that could enable continued large-scale use of fossil fuels in a tightly carbon-limited world
- Current commercial application of CCUS is focused on high purity CO₂ sources and EOR, but is limited in scale

Despite its importance and ambition to meet decarbonisation goals, CCUS has stalled and commercial deployment is very limited

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Document 79:
BP Carbon Solutions Group
Technology Confidential
Presentation, “CO₂ Capture,
Utilization and Storage
(CCUS): Overview of the
technology components,
policy and value proposition”
[BPA_HCOR_00037840]

investment in the technology: “CCS faces barriers including very high costs, commercial complexity, technical challenges and an uncertain business and policy environment, and BP has therefore scaled back its activities in this area.”

Internal discussions at BP later that year reinforced the huge gap between the reality of CCS deployment and the industry’s public positioning of the technology as a climate solution. A confidential presentation prepared by BP’s Carbon Solutions Group (**Document 79**) reviewed the capabilities, limitations, and business value of carbon capture, utilization, and storage (CCUS), a related term often used synonymously with CCS. The presentation explained that CCUS “could help sustain gas demand growth for longer” and “may be required in BP assets to reduce emissions as climate policy strengthens or becomes a license to operate requirement.” At the same time, the review acknowledged that decades of promises had produced remarkably little commercial progress. “Despite its importance and ambition to meet decarbonisation goals, CCUS has stalled and commercial deployment is very limited,” largely because the “energy penalty & cost with existing technology is high.” The presentation ultimately concluded that the carbon capture industry “is in its infancy,” observing that **“[o]ur competitors are progressing CCUS for core business needs, but not at a pace to offer CCUS as a climate solution.”**

In a 2018 internal company presentation, ExxonMobil staff again expressed skepticism that CCS could scale up to have a meaningful impact on carbon emissions (**Document 80**). The slide deck described competitor Shell’s newly released *Sky Scenario*,² in which Shell projected that limiting global temperature increases below two degrees Celsius would require CCS deployment to expand from around 50 existing facilities worldwide to roughly 10,000 facilities

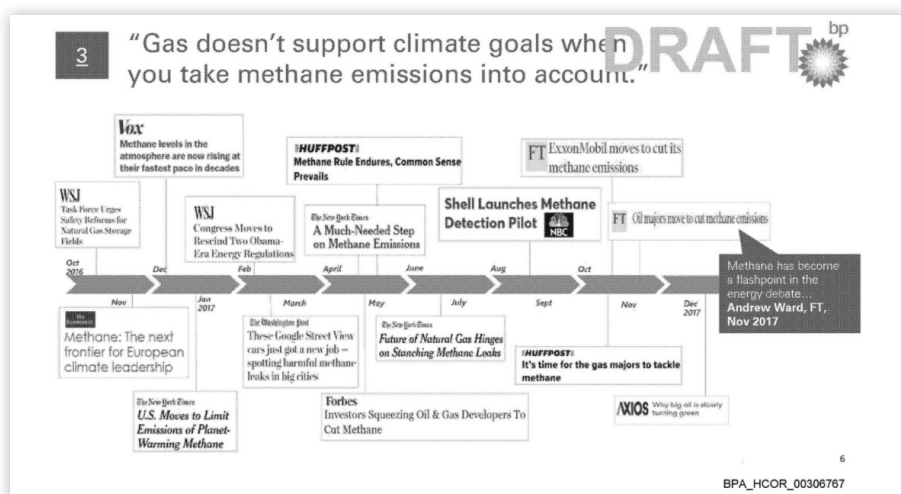
/// CCS faces barriers including very high costs, commercial complexity, technical challenges and an uncertain business and policy environment, and BP has therefore scaled back its activities in this area.”

over the following decades. The scenario’s “[f]undamental premise,” according to the ExxonMobil presentation, was that **“an extension of current efforts is insufficient for the scale of change required.”** As such, meeting climate change mitigation goals with CCS would require the “deployment of disruptive technology at mass scale.”³ ExxonMobil did not anticipate such a breakthrough, acknowledging that although CCS deployment would increase, its “global scale is limited.”

ExxonMobil’s internal skepticism about the viability of CCS as a climate solution did not stop the company from enlisting advertising firm BBDO to promote it as such. A creative brief from 2018 (**Document 81**) explained that Exxon wanted to “add credibility to the importance of our work on CCS technology” and highlight the company’s “long running experience in Carbon Capture.” According to the brief, the marketing of CCS was intended to target “[p]eople who see ExxonMobil as part of the problem of rising emissions, rather than part of the solution,” including members of the “General Population” as well as “Opinion Leaders” who were “often skeptical of our environmental efforts.” By promoting CCS, the company hoped to convince its key audiences that “ExxonMobil is actively working on effective ways to reduce the world’s CO₂ levels” — even as it continued to increase fossil fuel production and amplify the climate crisis.

The advertisements that followed, which compared CCS at industrial facilities to biological plants removing carbon dioxide from the atmosphere, ran the next year.⁴ An internal ExxonMobil email describing the launch (**Document 82**) explained that the television spot and corresponding digital advertisements built on the company’s promotion of algae biofuels, showing “another way ExxonMobil is working on future energy solutions aimed at reducing emissions.” The email explained that the CCS marketing had “tested very well” with the public and key opinion leaders despite providing few specifics about how the technology functioned, its current development status, or its future prospects; after viewing the ad, audiences had an improved view of CCS and “a more positive impression of ExxonMobil, knowing we are working on this technology.”

The fossil fuel industry took a similar approach in its promotion of natural gas, internally viewing it as a way to improve the environmental reputation of oil companies despite the industry’s understanding that gas had limited climate benefits. A confidential 2018 BP draft presentation (**Document 83**) outlined what it called an “ongoing commentary that aims to discredit gas as part of the future energy mix,”⁵ including the point that **“[g]as doesn’t support climate goals when you take methane emissions into account.”** The presentation did not refute the claim, but instead discussed plans for an extensive communications campaign to reshape public perceptions of natural gas in order to



Document 83:
BP Confidential Draft,
“Upstream communication
campaign framework:
Gas and methane”
[BPA_HCOR_00306762]

“[a]dvance and protect the role of gas – and BP – in the energy transition.” The campaign’s success, according to the presentation, would be measured by whether “[g]as [was] seen as vital to meeting Paris goals and as a potential partner to renewables,” and by whether “BP [was] recognised as a leading player in advancing the energy transition.”

Recent scientific breakthroughs that undermined the industry’s claims about the climate benefits of natural gas⁶ were increasingly treated as a public relations problem to manage. In 2019, a consultant working with BP circulated an article discussing new research showing that methane leakage across the supply chain likely offset the reduced carbon dioxide emissions of gas compared to coal (**Document 84**), remarking that “[t]his is an issue that will not go away, unfortunately.” BP employees agreed that the findings presented a significant challenge, with one describing the study as “quite concerning to us as another blow against natural gas,” while another characterized the article as “not a helpful story” and suggested considering “how this report and similar ones inform the views of policy makers and how pushback or not pushing back supports our advocacy strategy for supporting gas.” Rather than reviewing any technical measures to address methane leakage itself, the company’s internal discussions focused on how to respond to the study in a way that protected the image of both BP and natural gas, including consideration of whether it would be advantageous for the company to have a rebuttal come from the Natural Gas Supply Association and “not as BP directly.”

BP and other fossil fuel companies were firmly committed to selling both natural gas and CCS to the public as climate solutions, and the mounting evidence that neither were likely to offer a genuine solution for climate change was summarily discounted. To the contrary, the industry frequently suggested that their two favored climate ‘solutions’ be paired together. A confidential 2018 BP presentation

titled “Gas: the destination fuel” (**Document 85**) envisioned how gas and carbon capture could be paired to create “a near zero carbon power system.” While acknowledging that the scaling-up process of CCS “needs to be accelerated ... to achieve [its] full potential to deliver a low-carbon energy system with optimal use of hydrocarbons,” BP envisioned how the pairing of natural gas with CCS could position gas for decades to come. The presentation concluded by quoting Chief Executive Bob Dudley: “We see gas not just as a transition fuel, but as a destination fuel ... part of a low carbon future, not just a fuel for getting there.”

While promoting natural gas and CCS as climate ‘solutions,’ some oil companies also sought to convince the public that they were leading in the development of other nascent low-carbon energy technologies — despite very little practical success to back up their claims. In a 2016 email exchange concerning a television advertisement about ExxonMobil’s algae biofuels research (**Document 86**), one of the company’s senior advertising executives proposed describing the company as “researching ways to turn abundant algae into biofuels.” The wording prompted lengthy discussion between company advisors and other executives regarding usage of the word “abundant,” with one cautioning that the phrasing “might create some angst with the research folks” who understood the true limitations of their algae research program.

The following year, similar concerns surfaced during the preparation of another ExxonMobil algae television advertisement,⁷ this time approved by CEO Darren Woods (**Document 87**). An accompanying email explained the public relations value of the ad, noting its objective was “to showcase the company’s contribution to environmental solutions, which, as you will recall, is a message theme critical to our target audiences,” adding that company research indicated it was “one of the most effective concepts we have produced to date.” However, after Woods had endorsed the advertisement, another employee cautioned that the visuals risked overstating the maturity of the technology, writing, “[i]t’s a great spot however while the words highlight it’s an R&D activity and a ‘future’ outcome, the pics could suggest the work is in scale-up mode ... **Need to be mindful that we’re not suggesting it’s ready to go to large scale demo.**” ExxonMobil quietly discontinued its algae biofuels program in 2023 without issuing a formal public announcement.⁸

While publicly promoting CCS, natural gas, and algae biofuels as viable climate solutions, fossil fuel companies continued to utilize their networks of trade groups to undermine climate policy. In 2018, Shell funding of the Western States Petroleum Association (WSPA) was used for a campaign opposing a voter referendum that would have instituted a carbon tax in Washington state. Publicly, Shell took a neutral stance on the issue — despite its disapproval — because

“We see gas not just as a transition fuel, but as a destination fuel ... part of a low carbon future, not just a fuel for getting there.”

it wanted to maintain its “status as a global champion for a carbon price,” according to an internal Shell email (**Document 88**). Its “way out” of the delicate public relations scenario had been “taken off the table,” however, when a reporter “made public that money Shell contributed to WSPA was going directly to the campaign to defeat the initiative.” Still, the internal Shell discussion that followed noted that the company had successfully limited attention on the story because of its “exceptionally strong” media relationships, which had been built on “years of almost-daily collaboration on several issues that challenge our business and reputation.”

A 2019 internal ExxonMobil memo prepared for CEO Darren Woods (**Document 89**) ahead of a meeting between industry executives put the discrepancy between companies’ public positions and behind-the-scenes activities in even sharper relief. The memo detailed ExxonMobil’s position that the Oil and Gas Climate Initiative (OGCI),⁹ an industry coalition launched in 2014, should “remove reference to [the] Paris Agreement” from a pending “[s]tatement on responding to the climate challenge.” Despite the company’s widely touted public claim to support the international climate agreement, it internally feared that “[c]reating a tie between our advocacy/engagements and the Paris Agreement could create a potential commitment to advocate on the Paris Agreement goals,” and further recommended removing language that “potentially commits members to enhanced climate-related governance, strategy, risk management, and performance metrics and targets.” Even within an industry consortium created to demonstrate its commitment to addressing climate change, ExxonMobil sought to ensure that public expressions of support remained clearly separate from any obligation to advocate for, or align corporate decision-making with, the Paris Agreement’s objectives.

Internal discussions make clear that ExxonMobil did not expect the Paris Agreement emissions reductions targets to be fully implemented anyway, and therefore did not intend to adjust its long-term business strategy around them. In a 2018 email exchange regarding the potential effects of the Intergovernmental Panel on Climate Change (IPCC)’s latest report on future fossil fuel demand (**Document 90**), ExxonMobil Manager of Environmental Policy and Planning Peter Trelenberg expressed that he did not think “hypothetical 1.5 deg C scenarios (vs hypothetical 2 deg C scenarios) should really change our thinking vis a vis upstream strategies.” Achieving either target, he explained, would require “unprecedented changes to the global energy system and economy, at a rate and scale never before demonstrated, and with technologies not yet available and affordable.”

BP, too, hoped to benefit from its stated support for the Paris Agreement while it resisted any measures to ensure it complied with reduced greenhouse gas emissions targets. In 2019, Chairman Helge Lund penned an op-ed for the *Financial Times* attempting to explain the company's opposition to a shareholder resolution that would compel BP to set Paris-aligned emissions targets. Lund asserted: **"We recognise that the world is on an unsustainable path. We believe our strategy is consistent with Paris"** but that the resolution "does not allow for flexibility and would restrict our ability to transform in response to the uncertain path the transition will take. An accelerated transition as envisaged by the Paris Agreement would be a significant challenge for oil and gas supermajors." A cover note drafted to accompany the op-ed in an email to "key climate stakeholders" (**Document 91**) presented the shareholder resolution as an obstacle to decarbonization, arguing that the company needed to "remain financially strong in order to effectively play a role in a faster-paced energy transition," which, based on their operational plans, meant continuing to extract fossil fuels without any restrictions.

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- 1 BP (@bp_plc), "ICMY! Carbon Capture, Utilization, and Storage (#CCUS) could be vital for stabilising global temps," Twitter, November 4, 2016, 11:14 a.m., https://x.com/bp_plc/status/794558349979197440.
 - 2 Shell's 2018 *Sky Scenario* was added as a complement to its existing 2013 *New Lens* Mountains and Oceans scenarios that focused on exploring the energy transition. *Sky* introduced an ambitious new emissions pathway presenting a technically possible — yet highly challenging and unlikely — route for the global energy system to achieve net-zero carbon emissions by 2070. See: Shell, *Sky: Meeting the Goals of the Paris Agreement*, corporate report, March 2018, Internet Archive, https://web.archive.org/web/20200501150657/https://www.shell.com/promos/business-customers-promos/download-latest-scenario-sky/_jcr_content.stream/1530643931055/eca19f7fc0d20adbe830d3b0b27bcc9ef72198f5/shell-scenario-sky.pdf. Also see: Shell, *New Lens Scenarios: A Shift in Perspective for a World in Transition*, corporate report, February 2013, https://www.shell.com/news-and-insights/scenarios/what-are-the-previous-shell-scenarios/_jcr_content/root/main/section_745060082/promo_copy/links/item0.stream/1652287059126/77705819dcc8c77394d9540947e811b8c35bda83/scenarios-newdoc-english.pdf.
 - 3 Original emphasis.
 - 4 ExxonMobil, "Carbon Capture," television commercial, published March 18, 2019, iSpot.tv, 0:30, <https://www.ispot.tv/ad/IW6P/exxon-mobil-carbon-capture>.
 - 5 Emphasis removed.
 - 6 See, for example: Robert W. Howarth et al., "Methane and the greenhouse-gas footprint of natural gas from shale formations," *Climatic Change* 106 (2011): 679-690, <https://doi.org/10.1007/s10584-011-0061-5>; and Robert W. Howarth, "Methane emissions and climatic warming risk from hydraulic fracturing and shale gas development: implications for policy," *Energy and Emission Control Technologies* 3 (2015): 45-54, <https://doi.org/10.2147/EECT.S61539>.
 - 7 ExxonMobil, "Energy Farmer," television commercial, published April 17, 2017, iSpot.tv, 0:30, <https://www.ispot.tv/ad/wYtd/exxon-mobil-energy-farmer>.
 - 8 Collin Eaton, "Exxon Scientists Had Doubts About Algae Biofuels. The Oil Giant Touted Them Anyway," *Wall Street Journal*, March 31, 2026, <https://www.wsj.com/business/energy-oil/exxon-algae-biofuels-83c6b302>.
 - 9 OGCI describes itself as a "CEO-led, voluntary, oil and gas industry initiative" with the shared ambition for a "2°C future." Its main 'climate solutions' are listed as making "significant investments" in natural gas and CCS. See: Oil and Gas Climate Initiative, "OGCI CEOs jointly declare action on climate change," press release, October 16, 2015, <https://www.ogci.com/news/ogci-ceos-jointly-declare-action-on-climate-change/>; for more information on OGCI, see: "Oil and Gas Climate Initiative," DeSmog, webpage, accessed September 23, 2026, <https://www.desmog.com/oil-and-gas-climate-initiative/>.

CHAPTER 10

“TOO FAR AND TOO FAST”: VOLUNTARY (IN)ACTION AND THE EMPTY AMBITIONS OF NET ZERO (2016–2026)

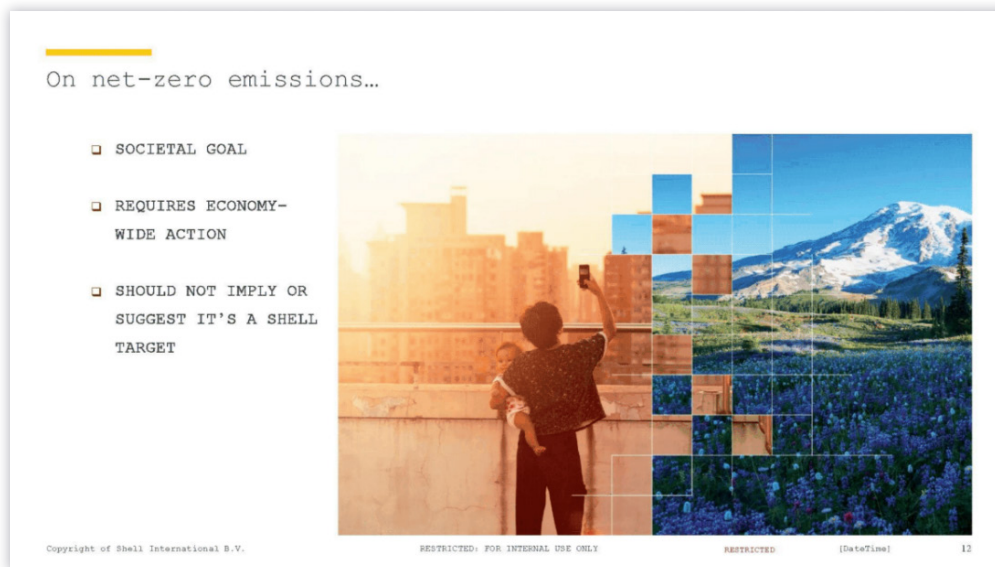
CO₂
427.35ppm

404.41ppm

Following the adoption of the Paris Agreement in 2015, fossil fuel companies faced growing pressure to demonstrate that they were committed to addressing climate change. In response, the industry began a slow, strained engagement with the concept of net-zero emissions in order to counter negative publicity and protect its social license to operate — without taking any meaningful action to meet those commitments. Behind the scenes, fossil fuel companies continued to use their network and influence to prevent any binding climate commitments. The result of this adapted strategy was an era defined by highly-publicized yet empty promises to address climate change from the fossil fuel industry while it continued to expand oil and gas production and thwart every attempt at climate action or accountability.

Shell was the first company to publicly embrace the net-zero narrative, but did so without any kind of plan for how it would achieve — or even contribute to — meeting those goals. In 2016, the company launched a campaign to promote its *Pathways to Net Zero Emissions* scenario report,¹ which was intended to position Shell “as a thought leader, actively looking ahead at what it will take to move society towards a prosperous, low-carbon future,” according to a leaked creative brief (**Document 92**). While the company hoped to bolster its reputation with the report, a line in the scenario’s legal disclosure revealed it was hardly more than marketing bluster as the company had “no immediate plans to move to a net-zero emissions portfolio over our investment horizon of 10–20 years.”

Four years later, Shell was still promoting the idea of a possible net-zero world while not having any sort of net-zero business plan itself. A confidential 2020 presentation (**Document 93**) reminded Shell employees that the company must have accurate messaging due to the “rising number of legal cases including active litigation specifically against Shell and other oil

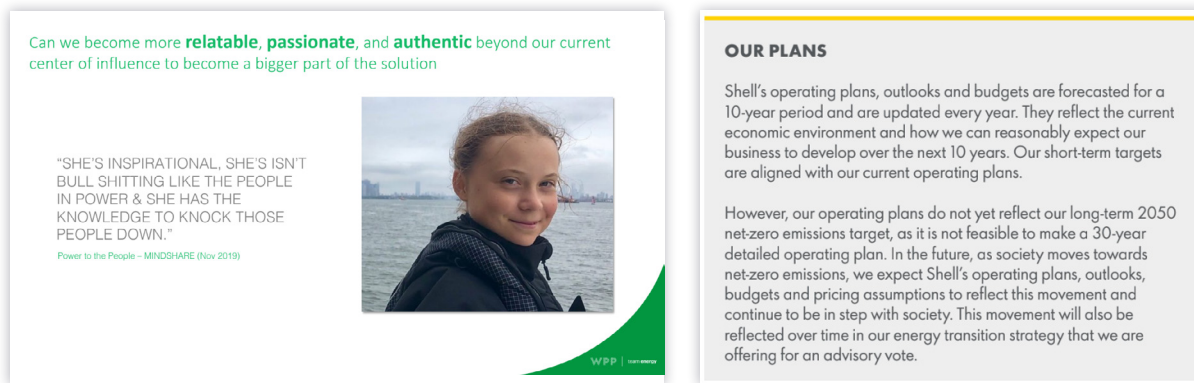


Document 93:
Shell email from Patricia Tarnez to Krista Johnson, Kristin Whitman, Scott Salmon, and Marnie Funk with attached powerpoint, Subject: "CCT Slides... Patricia's Thoughts" [SOC-HCOR-085197]

companies related to climate change and its impacts." The presentation instructed: **"Please do not give the impression that Shell is willing to reduce carbon dioxide emissions to levels that do not make business sense" and "[p]lease do not imply, suggest, or leave it open for possible misinterpretation that [net zero emissions] is a Shell goal or target."**

BP also sought to publicly align itself with the Paris Agreement by voicing support for net zero targets without making meaningful changes to its business model. In June 2019, when a *Guardian* reporter asked BP whether it supported achieving net zero emissions by 2050, the company's head sustainability and climate policy executive Paul Jefferiss explained in an internal email to other senior executives (**Document 94**) that the company needed to walk a fine line regarding the Paris Agreement goals. "Whereas our comments on ambitious targets in the past might have been that they are costly, damaging and difficult to achieve," Jefferiss explained, "I don't think we can make such comments any longer on targets that are intended to deliver the Paris goals." BP should "be supportive of ambitious targets and timetables, including net zero targets, to meet the Paris goals," he advised, but there were limits to what the company would actually commit to: **"it goes a bit too far to state or imply support for net zero by 2050,"² as doing so could "put some existing assets at risk."**

As public discourse around the "climate emergency" grew, BP sought to shift attention away from its continued oil and gas expansion. A leaked January 2020 creative briefing presentation made for BP by global marketing and communications conglomerate WPP (**Document 95**) explained that "[t]he climate crisis took centre stage as the biggest social, political, and economic questions of the next century" in 2019: "Society is increasingly recognizing that there is a climate

**Document 95:**

Leaked BP/WPP Presentation, "BP Creative Workshop Briefing Document"

Document 96:

Shell 2021 *Energy Transition Strategy* Report

emergency requiring a rapid energy transition." As such, the ad firm wanted to frame BP as "a global energy company that's transforming itself to help the world transition to a low carbon future." A slide featuring an image of Greta Thunberg explained that a goal of the campaign was to present BP as more "relatable, passionate, and authentic," so as to be seen as "a bigger part of the solution." Yet the first business strategy identified in the same document was simply: "Invest in more oil and gas."

Following WPP's advice, BP took its claims to support society's net zero ambitions one step further by making their own public commitment. In February 2020, new BP CEO Bernard Looney announced the company's ambition to reduce fossil fuel production by 40% by 2030 and become a net zero company by 2050 or sooner: "The direction is set. We are heading for net zero. There is no turning back."³ Shell followed suit, announcing its intention to go net-zero by 2050 soon after. The company's 2021 *Energy Transition Strategy* report (**Document 96**) provided the first details on how they planned to achieve net zero emissions and align with the Paris Agreement. But once again, the legal disclosure that accompanied the report exposed the emptiness of the ambition, explaining that its **"operating plans do not yet reflect our long-term 2050 net-zero emissions target, as it is not feasible to make a 30-year detailed operating plan."** The European-based majors' highly publicized new pledges received criticism from the largest U.S.-based oil and gas companies, with Chevron CEO Mike Wirth explaining that his company would "not set long-term targets that we're not exactly sure how we will get to,"⁴ and ExxonMobil's Darren Woods calling such commitments a "beauty competition."⁵ Both companies soon changed their tune, however: Chevron announced its "aspiration" to go net zero in 2021,⁶ while ExxonMobil declared its own 2050 net zero "ambition" the following year.⁷ The news cycle about the industry's bold environmental goals had hardly ended before the oil majors began their retreat. Public scrutiny from investors⁸ and

environmental groups⁹ had shone a spotlight on the shortcomings of the companies' net zero commitments and the lack of clear pathways for them to be met. Facing pressure to clarify how they would actually follow through and reduce emissions, the companies instead opted to pare back and eventually abandon their climate pledges altogether. The dominoes began to fall when BP quietly noted in its 4Q 2022 earnings report that it would be targeting a 25% reduction in fossil fuel production by 2030 rather than the 40% announced just a few years prior.¹⁰ By 2025, BP had completely scrapped the main tenets of its 2050 net zero strategy. Newly-appointed CEO Murray Auchincloss announced at the company's annual general meeting (**Document 97**) that the original ambition it set five years ago went "too far and too fast," explaining that the company's "optimism was misplaced." Instead, BP was now moving forward to "reset the strategy" by increasing investments in oil and gas to \$10 billion per year, with a more "disciplined" approach to investing in the energy transition. Shell backtracked on its nearer-term carbon reductions targets in 2024, announcing that it had "chosen to retire" its 2035 carbon intensity target.¹¹ Chevron, too, has quietly acknowledged its failure to implement net zero policies, disclosing on its corporate sustainability webpage that while it "continues to have the [net zero] aspiration, we no longer use 2050 as a timeline."¹²

/// We were optimistic for a fast transition but the optimism was misplaced ... the world changed. We went too far and too fast."

Fossil fuel companies' strategic embrace of the rhetoric of net zero in the years after the Paris Agreement stands in stark contrast with the industry's climate obstruction over the same period. Facing a growing wave of investigations and litigation, oil majors like BP sought to covertly undermine climate lawsuits by funding front groups such as the Manufacturers' Accountability Project (MAP). Established by the National Association of Manufacturers (NAM) in direct response to climate litigation, MAP advocated against the cases in the media and amicus briefs — without disclosing its direct funding by oil and gas companies. But according to a 2019 email between top BP executives (**Document 98**) discussing its "Defend BP" budget, the company made a \$250,000 contribution to the "NAM MAP project" in 2018 and more than doubled its funding for NAM MAP the following year, with spending directed toward **"mitigating risks on reputational, policy and legal issues that could have material impacts."**

The companies also continued to resist efforts to expose or document the full extent of their climate knowledge and actions.¹³ During a 2024 joint congressional investigation conducted by the Senate Budget Committee and House Oversight Committee,¹⁴ the American Petroleum Institute (API), BP, Chevron, ExxonMobil, Shell, and the U.S. Chamber of Commerce delayed production of subpoenaed documents and withheld records. Various instances of mistaken redactions of documents that were eventually handed over, either of public materials or of documents that were not redacted elsewhere, suggest that the

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 Cc: Ellen Moskowitz [redacted]@brunswickgroup.com]
 From: Hallie Dewey [redacted]@brunswickgroup.com]
 Sent: Wed 26/07/2017 4:13:35 PM (UTC)
 Subject: The Guardian: Trump pulled out the oil industry playbook and players for Paris

Trump pulled out the oil industry playbook and players for Paris

The fossil fuel industry used the same arguments, and even the same people, to block climate policies in the 1990s. We must not let this happen again.

By Benjamin Franta
 The Guardian
 July 26, 2017

Since President Trump announced on June 1 that the U.S. would cease implementation of the Paris Agreement, pundits have argued about whether the American pullout will truly affect greenhouse gas pollution one way or another, since, after all, the Paris Agreement was not legally binding to begin with.

Redacted - First Amendment

companies were attempting to avoid providing additional evidence of their advanced knowledge of climate harms. When BP produced a 2017 email forwarding an article that had appeared in *The Guardian*¹⁵ (**Document 99**), for example, the company redacted portions of the piece that discussed the industry's historical climate obstruction tactics.¹⁶

As evidence of the fossil fuel industry's longstanding climate knowledge and deception accumulated, it increasingly directed efforts toward a solution that would remove the threat of accountability in the courts altogether. Since at least the late 2010s, oil and gas companies have been pursuing a legislative provision that would immunize them from lawsuits, akin to the waiver the gun industry received in 2005 with the passage of the Protection of Lawful Commerce in Arms Act (PLCAA).¹⁷ The campaign reached its apex in early 2026 with the release of API's "Agenda For Affordable, Reliable & Secure American Energy" (**Document 100**), which called for policymakers to "STOP EXTREME CLIMATE LIABILITY POLICY"¹⁸ and "[p]rotect U.S. energy producers and consumers from abusive state climate lawsuits." Republican lawmakers subsequently introduced legislation to provide the industry with a liability shield in state and federal courts,¹⁹ and, as of summer 2026, various state legislatures have considered and even adopted their own waivers to restrict climate litigation.²⁰



STOP EXTREME CLIMATE LIABILITY POLICY

Protect U.S. energy producers and consumers from abusive state climate lawsuits and the expansion of climate "superfund" policies that bypass Congress and threaten affordability.

Document 99:

BP Improper Redaction of forwarded Guardian Article, "Trump pulled out the oil industry playbook and players for Paris," by Benjamin Franta [BPA_HCOR_00305412]

Document 100:

API "Agenda For Affordable, Reliable & Secure American Energy"

Fossil fuel companies are abandoning their climate pledges and creating new mechanisms of climate obstruction, and all the while continue to profit from business as usual. Nowhere has the profound misalignment between the industry's acknowledgement of climate reality and continued exacerbation of the crisis been more apparent than in Shell's 2026 Energy Security Scenarios, tellingly titled *Challenges to the transition* (**Document 101**). The company admits that the planet is already experiencing climate impacts and anticipates that continued warming will be met with even more significant consequences, projecting that **"pressures on agriculture [will] become more pronounced," leading to "national stresses that emerge later in the century."** And yet, Shell continues unabated fossil fuel production while pointing to ever more speculative and marginal technologies it says will lower emissions.²¹ The company has retreated from its previous commitments without making any meaningful effort to align itself with the net zero pathway it argues is necessary to avoid the worst impacts of climate change. As the world extracts and consumes record amounts of fossil fuels and drifts further from meeting internationally agreed upon climate targets,²² the planet's trajectory increasingly resembles the grim future the companies themselves projected — and chose to hide — decades ago.²³

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CONCLUSION

Big Oil's campaign to deceive the public about its role in climate change over the last seven decades has been as successful as it has been consequential. The fossil fuel industry has undermined confidence in climate science, delayed meaningful policy action, and misrepresented the impact of fossil fuels to consumers. In doing so, it has put humanity on a collision course with climate catastrophe — just as oil and gas companies internally predicted decades before the risks of global warming were widely understood.

The documents collected here show how the fossil fuel industry's response to climate change evolved over time. When oil and gas producers initially began to learn about the harmful impacts of burning fossil fuels, they advocated against heeding the warnings of their own scientists and doubled down on expanding production. Later on, as the scientific consensus solidified around the conclusions that industry researchers had reached in the previous decades, those same companies concocted plans to manipulate public opinion and counteract support for a transition away from fossil fuels. And in the years since outright climate denial became an untenable public stance, the industry has insisted that it is helping to solve the crisis it created even as it does everything in its power to undermine the transition away from fossil fuels.

The false promises and deceptive practices of the fossil fuel industry in recent years are nothing new. For all of the modern and creative ways oil and gas companies have developed to mislead the public and delay climate action, the strategy remains largely the same today as it was decades ago. What has changed is the world in which that deception is taking place. The rising temperatures, changing precipitation patterns, agricultural disruption, sea-level rise, widespread wildfires, and more frequent floods that the fossil fuel industry knew would result from unchecked consumption of their products are now being experienced by communities all across the globe. With these environmental changes have come rising deaths, mounting insurance losses, and destroyed homes, businesses, and infrastructure. As the evidence presented here makes clear, oil and gas producers understood the magnitude of the crisis they were creating, and still they refused to change course. Now we are all experiencing the consequences.

The urgency of the moment has never been greater, and Big Oil remains the most significant obstacle to reducing emissions and addressing climate change. There are now dozens of legal actions in the United States and across the globe that seek to hold oil majors and their enablers accountable for the harm their deception has caused. Accountability for the fossil fuel industry's decades of deception is not a solution to the climate crisis on its own, but ensuring that oil and gas producers cannot continue to lie with impunity is a necessary step. Corporations have been held accountable for deceiving the public before; the fossil fuel industry is overdue.

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