

Part 2: The Dirty Dozen Documents of Big Oil's Secret Climate Knowledge

Industry documents from the 1980s reveal how fossil fuel companies promoted climate denial and avoided action to limit catastrophic climate impacts.



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2

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THE GREENHOUSE EFFECT

By the late 1970s, the petroleum industry had spent about two decades collecting information from their own scientists and outside experts and knew

that burning fossil fuels would create catastrophic climate change. In the minds of the fossil fuel executives, this point must have been hammered home when federal scientists published a report on [carbon dioxide and climate change](#) in 1979. That report announced, “We now have incontrovertible evidence that the atmosphere is indeed changing and that we ourselves contribute to that change.”

And how were humans causing this change? “Man’s use of fossil fuels and exploitation of the land,” [federal scientists concluded](#).

By 1980, industry published its [first attempt at deceiving the public](#) on what it knew about greenhouse gases — a booklet that downplayed climate change’s dangers and argued that scientists were divided on the research. Throughout the ‘80s, fossil fuel companies began accumulating more evidence that climate change was going to be a disaster in the future and that governments were going to start regulating their industry. Records show that they began to plot ways to deceive the public and undermine policies, and in 1989 they created a coalition of American companies to fight policies and deny that climate change was real.

Stanford science historian Ben Franta and I continue our discussion of these key documents, what they say, how they were found, and what this means for the fossil fuel industry. This conversation is part two in our series and has been edited and condensed for clarity. Catch up on [part one](#).

DOCUMENT 7: 1981

Exxon completes an “Atmospheric CO2 Scoping Study,” which concludes that reducing fossil fuel use through efficiency and renewable energy is the only foreseeable option. Carbon capture is technically possible but not economic. And the company was monitoring all scientific research and policy activities, through a single collection point. Legislation to reduce fossil fuel use was predicted by the late 1980s.

Available [at ClimateFiles](#). Provenance: Inside Climate News featured this document in a 2015 story titled, “[Exxon’s Own Research Confirmed Fossil Fuels’ Role in Global Warming Decades Ago](#).” [View on DocumentCloud](#).

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
EXECUTIVE SUMMARY	2
RECOMMENDATION REGARDING COMPREHENSIVE PLAN DEVELOPMENT	4
GOVERNMENT AND INSTITUTE R&D PROGRAMS AND PLANS	5
EXXON TECHNICAL PROJECTS RELATED TO CO ₂	9
KEY QUESTIONS IN ASSESSING NEED AND BENEFITS FOR PHASE II	11
LEGISLATIVE SITUATION	13
BIBLIOGRAPHY	14
APPENDIX A - TITLE VII OF ENERGY SECURITY ACT	16

THACKER: What I love about this document is that you can see they're kind of getting concerned. Exxon isn't interested in looking at a study here, a study there. They create a central intake point for scientific information and they start monitoring any policies that might limit fossil fuels.

FRANTA: They're keeping an eye on everything. They knew that people were going to start trying to control fossil fuel use, and they expected some type of legislation in another eight or nine years. So they had to get ready.

And they talk about solutions like carbon capture, which shows this was an established technology. Carbon capture is not a new technology, it's an old technology. The simple fact was, even then, it was just too expensive compared to renewables.

THACKER: It cost too damn much. HuffPost just had this [really great story](#) about a huge disaster where this carbon capture pipeline burst and almost killed people down in Mississippi. And today, you hear all this talk, “carbon capture, carbon capture.”

But four decades ago, industry knew it made no financial sense.

FRANTA: Economically, it didn’t work compared to renewables. And renewables are now so much cheaper, so the economic argument against carbon capture is even stronger today.

I see Exxon’s ads about carbon capture all the time on Twitter. I'm thinking, “You had 40 years to make it work and you didn’t. You had your chance.”

This document puts all of today’s carbon capture rhetoric from the fossil fuel industry into context.

THACKER: You know it’s bullshit, because 40 years ago, Exxon called bullshit on carbon capture.

FRANTA: They’ve had so much money and so many resources for decades. With all their vast research budgets, and the very existence of the entire industry at stake, they couldn’t make carbon capture work. It makes you question if it’s economically viable in any scenario.

DOCUMENT 8: 1981

Exxon’s Manager of Strategic Planning and Programs, Roger Cohen, reviews the company’s long-term plans until 2030 and reports that it is “distinctly possible” that they will “indeed be catastrophic (at least for a substantial fraction of the earth’s population).”

Available [at ClimateFiles](#). Provenance: Inside Climate News featured this document in a 2015 story titled, “[Exxon’s Own Research Confirmed Fossil Fuels’ Role in Global Warming Decades Ago](#).” [View on DocumentCloud](#).

I think that this statement may be too reassuring. Whereas I can agree with the statement that our best guess is that observable effects in the year 2030 are likely to be "well short of catastrophic", 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). This is because the global ecosystem in 2030 might still be in a transient, headed for much more significant effects after time lags perhaps of the order of decades. If this indeed turns out to be case, it is very

THACKER: Exxon's Roger Cohen reviews the company's long-term plans and reports that climate change might be catastrophic in 2030, or at least for a substantial fraction of the population. I like how it's super nuanced, "I'm not saying for *everyone* it's going to be catastrophic, but some people on planet Earth ..."

FRANTA: Remember all the Cold War planners who were like, "If we have a *limited* nuclear war, then only several million people will die." They saw this as one acceptable scenario. And today we think that's absurd, right?

Exxon is doing something similar here. They're like, "If we keep going the way we are, then it'll be catastrophic for *some* people in the world." The difference between the generals in the Pentagon and the executives at Exxon is that Exxon went ahead and executed on this catastrophic plan.

THACKER: At this time, [Roger Cohen](#) is obviously this major player inside Exxon. So what does Cohen do? He leaves Exxon and joins the [George Marshall Institute](#), one of the more notorious climate denial groups.

Twenty-five years after he wrote that memo for Exxon warning about possible catastrophic problems from climate change, [Cohen writes in 2008](#): "At this point there is little doubt that the IPCC position is seriously flawed in its central position that humanity is responsible for most of the observed warming of the last third of the 20th century, and in its projections for effects in the 21st century."

He wrote this essay for another climate denial group — the [Science and Public Policy Institute](#).

FRANTA: God, that's amazing. I didn't even know that.

DOCUMENT 9: 1982

Exxon completes a comprehensive, 40-page briefing on the greenhouse effect. The cover letter explained that “The material has been given wide circulation to Exxon management and is intended to familiarize Exxon personnel with the subject. ... However, it should be restricted to Exxon personnel and not distributed externally.” The report predicts with high precision and accuracy CO₂ accumulation and global warming through the 21st century, with around 1°C warming by 2020 and 3°C warming by 2100.

Available [at ClimateFiles](#). Provenance: Inside Climate News featured this document in a 2015 story titled, “[Exxon’s Own Research Confirmed Fossil Fuels’ Role in Global Warming Decades Ago](#).” [View on DocumentCloud](#).

EXXON RESEARCH AND ENGINEERING COMPANY

P.O. BOX 101, FLORHAM PARK, NEW JERSEY 07932

M. B. GLASER
Manager
Environmental Affairs Programs

Cable: ENGREXXON, N.Y.

November 12, 1982

CO₂ "Greenhouse" Effect

82EAP 266

TO: See Distribution List Attached

Attached for your information and guidance is briefing material on the CO₂ "Greenhouse" Effect which is receiving increased attention in both the scientific and popular press as an emerging environmental issue. A brief summary is provided along with a more detailed technical review prepared by CPPD.

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

THACKER: I like how Exxon slapped a cover page on their 40-page briefing on the greenhouse effect that said everyone in Exxon should read it, but don't distribute externally. "Hey guys, close hold!" What's in this 1982 document they don't want people to know about?

FRANTA: It has all sorts of predictions for the future, sometimes really specific impacts. In one figure, Exxon predicts exactly how much fossil fuel will be produced in the future, and how much global warming that's going to cause. They predicted this to a tenth of a degree, and it's turned out to be incredibly accurate. It's actually true to life.

We've actually been living this. For the last 40 years, we've been traveling up this curve of global warming that Exxon knew would happen from this one figure.

THACKER: And it's another example of Exxon using models, because we know models work. You've written about climate change and then Exxon has attacked you, sometimes for writing about their own documents, right?

FRANTA: Exxon uses front groups. One of them is called [“Energy in Depth.”](#) Whenever I give a talk at an academic conference, they apparently watch it or find recordings. Or if I write a paper, then they write hit pieces about me, right? They want to identify anyone who's a threat to the oil industry and try to smear or discredit them.

THACKER: I just want to make sure that you weren't secretly involved in writing Exxon's report that predicted how bad climate change would be from burning fossil fuels. How old were you in 1982?

FRANTA: I was minus four years old.

THACKER: So you weren't even born in 1982.

FRANTA: I had very little influence at Exxon in 1982, verging on none.

DOCUMENT 10: 1988

Internal Shell study titled, “The Greenhouse Effect”. Shell held an internal five-year-long study of climate change from 1981 to 1986. This 1988 document is a 90-page internal report on that committee's work. The report predicts that global warming could lead to changes “the greatest in recorded history,” imposing “costly” adaptations and a slew of damages, including “destructive floods,” abandonment of entire countries, and forced migration. The report warns against inaction and states “...by the time the global warming becomes detectable it could be too late to take effective countermeasures to reduce the effects or even to stabilize the situation.”

Available [at ClimateFiles](#). Provenance: The Guardian featured this document in a 2017 article titled, [“‘Shell knew’: oil giant's 1991 film warned of climate change danger.”](#) [View on DocumentCloud.](#)

Mathematical models of the earth's climate indicate that if this warming occurs then it could create significant changes in sea level, ocean currents, precipitation patterns, regional temperature and weather. These changes could be larger than any that have occurred over the last 12,000 years. Such relatively fast and dramatic changes would impact on the human environment, future living standards and food supplies, and could have major social, economic and political consequences.

THACKER: It's great to look at an internal Shell document because some people will think we're meant to focus on Exxon. But there happens to be quite a few oil and gas companies, which is why we call it an industry. First off, I love that this document is stamped "CONFIDENTIAL."

When I get a bunch of documents, the first thing I look for is "confidential."

FRANTA: This Shell report is equivalent to Exxon's report on climate change. It's almost 100 pages long and goes into the whole science of global warming. But it also talks about all the impacts: flooding around the world and big economic damages. And they discuss how global warming is going to transform the world. It even says, "The changes may be the greatest in recorded history."

THACKER: Destructive floods. It's the Old Testament and Noah, with the abandonment of entire countries. Forced migration.

FRANTA: It's Biblical. Just imagine saying, "Bangladesh might have to be completely abandoned, but it's worth it. We like selling oil."

And it says by the time we can detect global warming, then it's going to be too late to stop it.

THACKER: By "detect" do you think they're talking about when scientists can see it. Or is it when some soccer mom goes, "Jesus Christ! All this damn global warming is causing these thunderstorms and tearing up the soccer fields. How's my kid gonna win a trophy?"

FRANTA: Global warming is pretty much pretty detectable these days by your average person. So many weird weather patterns that nobody remembers ever happening before. But already in the '90s, it was detectable by scientists.

They started this study in '81, but published it internally in '88. So Shell knew what was going to happen in the early '80s, before scientists were detecting climate change.

DOCUMENT 11: 1989

Exxon's manager of science and strategy, Duane Levine, gives a presentation to the company's board of directors, titled, "Potential Enhanced Greenhouse Gas Effects: Status and Outlook," warning that governments around the world would soon restrict and replace fossil fuels the way they were then doing with chlorofluorocarbons (CFCs) to protect the ozone layer. Levine recommended a strategy of emphasizing scientific uncertainty, the costs of climate action, and deflections that included energy efficiency, reforestation, and natural gas.

Available [at ClimateFiles](#). Provenance: Reporters found this in Exxon archives at the University of Texas at Austin and the Los Angeles Times featured it in a 2015 story titled, "[How Exxon went from leader to skeptic on climate change research](#)." [View on DocumentCloud](#).

WHERE IS ALL THIS HEADED? I BELIEVE THERE IS A PATTERN...AND IT'S ROOTED IN THE EVOLUTION OF THE JUST-COMPLETED MONTREAL PROTOCOLS TO PROTECT THE STRATOSPHERIC O₃ LAYER BY LIMITING MAN-MADE CFCs.

STRATOSPHERIC OZONE/PEG ANALOGY

<u>OZONE LAYER</u>			<u>ENHANCED GREENHOUSE</u>	
'74	✓	ATMOSPHERIC CHEM/PHYS	✓	'75
	✓	GROWTH IN [CFC'S] / [CO ₂] & [TRACE GASES]	✓	
	✓	INDUSTRIAL SOURCES	✓	
	✓	MODELS: END EFFECT PROJECTIONS	✓	
	✓	CONCEPT OF 'DELAY'	✓	
	✓	ENVIRONMENTAL CAUSE	✓	
	✓	INTERNATIONAL OWNERSHIP	✓	
	✓	US/UN AXIS	✓	
	✓	CRITICAL EVENT	✓	
	✓	CALL FOR ACTION	?	
		<u>VIENNA CONVENTION</u>	?	
'87		<u>MONTREAL PROTOCOLS</u>	?	

THACKER: We're back to our favorite: Exxon. Duane Levine gives a presentation to the company's board of directors where he's comparing what governments did with these chemicals called CFCs that were destroying the ozone layer, with what might happen to fossil fuels when governments start to focus on climate change.

He's like, "Hey guys, the Vienna Protocol and Montreal Protocol destroyed the market for CFCs. Guess what's gonna happen to us?" This is a point where we stop discussing wonky science and move into the politics. The gloves are coming off.

FRANTA: Absolutely. This is one of the most important master strategy documents we've found so far. Duane Levine's high up in Exxon. He's like, "Remember that whole ozone layer thing, and then governments got together to get rid of these chemicals? Well, the same thing is happening with climate

change, and countries are starting to get together. We need a strategy for delaying this whole process and shutting it down.”

What's crazy is that this strategy is basically the same stuff that we see today.

THACKER: I wrote an obituary for [Fred Singer](#). When I first ran across him in the mid-2000s, I knew him as one of the famous climate denialists who reporters would quote. I didn't even know until later he had done ozone hole denial.

FRANTA: They were recycling scientists. And Fred Singer was part of the strategy that emphasized scientific uncertainty.

Climate denial since the '90s has emphasized the cost of climate action. That's all of those economists that the oil industry hired to say that climate policies were too expensive. And there's the “Oh, we need to use more natural gas.” That's still going on. Then there's really diabolical stuff, “Hey, we should support reforestation.”

THACKER: Plant a tree to save the planet. Anything that keeps the focus off “Stop drilling for oil.”

FRANTA: Reforestation is good. But here it's being used as a distraction technique, as a deflection. Not dissimilar to the way “carbon offsets” are used today. They understood all of this back in '89, and they went ahead and implemented it. Emphasizing scientific uncertainty doesn't work as well anymore. But all the other prongs are pretty much going strong.

THACKER: The natural gas thing has been a [big part of the Breakthrough Institute](#), with Ted Nordhaus and [Michael Shellenberger](#). But ExxonMobil saw natural gas as a bullshit distraction technique back when Nordhaus and Shellenberger were teenagers in '89.

FRANTA: These are long running, macro strategies, and I think sometimes people fall into them. Who can argue with energy efficiency, for example?

We've recently learned through new research that Exxon shared this strategy with oil companies all around the world. It looks like they acted as a ringleader in, essentially, an international conspiracy to deceive the public about climate change and fossil fuels. It's truly incredible.

THACKER: Duane Levine, who puts all this together, is a revered chemical engineer. There's apparently a [lab at Johns Hopkins Engineering School](#) named after him.

FRANTA: Part of the story is how these people are lauded and praised in professional circles. But actually, they were architects of global catastrophe.

DOCUMENT 12: 1989

The fossil fuel industry forms the [Global Climate Coalition](#), which promotes the same talking points envisioned by Levine at Exxon. The membership list includes a huge swath of the U.S. economy, including companies in oil and gas, coal, petrochemicals, rail, and other sectors.

Available [at ClimateFiles](#). Provenance: Archives of [Nicky Sundt](#), former communications manager at the US Global Change Research Program (USGCRP). [View on DocumentCloud](#).

Global Climate Coalition Membership

Aluminum Association	General Motors Corporation
American Electric Power Service Corporation	Georgia Pacific Corporation
American Gas Association	Hercules Inc.
American Iron & Steel Institute	IBM
American Mining Congress	Jefferson Energy Foundation
American Nuclear Energy Council	Maytag Corporation
American Paper Institute	Motor Vehicle Manufacturers Association
American Petroleum Institute	National Association of Manufacturers
Amoco Corporation	National Coal Association
ARCO	National Steel Corporation
Armco, Inc.	Occidental Chemical Corporation
Association of Home Appliance Manufacturers	Pacific Gas & Electric Company
Automobile Importers of America	Peabody Holding Company, Inc.
BHP - Utah International, Inc.	Petrochemical Energy Group
Business Roundtable	Petroleum Marketers Association of America
Chemical Manufacturers Association	Phillips Petroleum Company
Chrysler Corporation	Portland Cement Association
Clean Air Working Group	PPG Industries
Coalition Opposed to Energy Taxes	Process Gas Consumers Group
Consolidation Coal Company	Rubber Manufacturers Association
Consumers Power Company	Shell Oil Company
Council of Industrial Boiler Owners	Society of the Plastics Industry, Inc.
Dow Chemical Company	Southern Company Services, Inc.
E.I. Dupont de Nemours & Company, Inc.	Texaco, Inc.
Eastman Kodak	Union Carbide Corporation
Edison Electric Institute	UNOCAL Corporation
Electricity Consumers Resource Council	U.S. Chamber of Commerce
Ford Motor Company	U.S. Council for Energy Awareness
	U.S. Council for International Business

THACKER: In 1988, we have this really hot summer, and climate scientist Jim Hansen gives this famous, televised testimony before Congress about climate change. And that's when the fossil fuel industry starts the Global Climate Coalition.

This document comes from the basement files of Nicky Sundt, who I've known for like 15 years. She had all these documents filed in boxes, down in her basement on Capitol Hill. This is like a mile from API's headquarters. API is sending their lobbyists running all around Washington, D.C., to control the

message and it's like, “Hey, guys, did you think to check out Nicky Sundt’s basement?”

FRANTA: These are the stories that make you wonder what else is out there. Who has papers in the attic? Many more documents could be out there.

THACKER: This doesn't show anything nefarious. It’s just members of the first coalition to stop climate legislation, but they’re not all fossil fuel companies.

When you back up to the 1950s, you see fossil fuel companies learning about climate change. Then we see them gathering more information during the ‘60s and ‘70s and realizing the greenhouse effect is going to be bad. By 1980, they’re taking their first tentative steps at fooling the public, and throughout the ‘80s they’re figuring out that climate change will eventually be catastrophic, governments are going to regulate, and they start designing strategies to derail that.

Then, WHAM! Corporate America jumps up to attack any climate policies. Because this isn’t just fossil fuel companies.

FRANTA: They're not all fossil fuel companies, but most of them are close to fossil fuels in some way: power companies, automobile makers. You got the petrochemical companies like the Chemical Manufacturers Association.

THACKER: Maytag? They make refrigerators and washers.

FRANTA: IBM is on here. The broad elements of the fossil fuel industry and some other mobilized against climate action. The Global Climate Coalition was [one of the main organizations](#) to promote climate denial over and over, saying, “Fossil fuels don't cause global warming.” And they were lobbying against everything.

This is a list of the first people and groups involved with organized climate denial. That means they were all privy to internal strategizing, goals, and activities. What documents do they have?

THACKER: These are the 12 documents that you picked, because they tell a story. But someone else could pick 12 others.

FRANTA: There's over a thousand internal and other relevant documents already posted online and that is likely the tip of the iceberg. We could make a list of the top 20, the top 200. There's a lot of information out there.

THACKER: But if you pick a different set, what do they tell you?

FRANTA: It shows that they knew that they were going to cause a global catastrophe if they continued business as usual. And they went ahead and did it anyway. And then they lied to the public about it, and they blocked people who tried to stop the catastrophe from happening.

But now we have this knowledge. We know that they knew how deeply they lied, and how sophisticated they were in tricking the public. So it's time for accountability, and the question is, "How are we going to stop these deceptions and hold these companies accountable?"

BAKER'S DOZEN

Like we said, there are thousands of documents out there. Here's a bonus document uncovered by DeSmog in 2016.

1980: Exxon's Canadian Subsidiary Imperial Oil Limited sends a "Review of Environmental Protection Activities for 1978-1979" to Exxon management. The document is marked "Proprietary to Imperial Oil and Affiliates." One passage reads, "There is no doubt that increases in fossil fuel usage and decreases of forest cover are aggravating the potential problem of increased CO₂ in the atmosphere."

Available [at DeSmog](#). Provenance: Imperial Oil Archives in Alberta, Canada.

This ends part two of our two-part look at the ‘Dirty Dozen of Big Oil’s Secret Climate Knowledge.’ [Read part one](#).

This interview has been co-published by The DisInformation Chronicle and [DeSmog](#).