

The Climate Deception Dossiers

*Internal Fossil Fuel Industry Memos Reveal
Decades of Corporate Disinformation*



Union of
[Concerned Scientists]

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Lead authors

Kathy Mulvey
Seth Shulman

Contributors

Dave Anderson
Nancy Cole
Jayne Piepenburg
Jean Sideris

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Kathy Mulvey served as a UCS consultant on this project. Kathy has a quarter-century of experience in strategic corporate research, policy analysis, and campaigning and advocacy on a range of corporate accountability, environmental, and public health issues.

Seth Shulman is the editorial director of UCS. A veteran science journalist, he is the author of the 2007 UCS report *Smoke, Mirrors, and Hot Air: How ExxonMobil Uses Big Tobacco's Tactics to Manufacture Uncertainty on Climate Science*, among many other books and publications.

Dave Anderson is an outreach coordinator in the Climate & Energy Program, where he engages citizens and academic experts in campaigns to advocate for and defend climate science and policies. He has an MA in Political Science from the University of New Hampshire.

Nancy Cole is the campaign director for the UCS Climate and Energy Program. A grassroots-organizing and corporate campaigning veteran, she oversees work aimed at securing policies that reduce U.S. global warming emissions and speed the country's transition to clean energy. Ms. Cole also works with scientists across the country to bring the voice of the scientific community to bear on critical global environmental issues.

Jayne Piepenburg is the climate accountability intern with UCS. She has a master's degree from Indiana University School of Public and Environmental Affairs, with a focus on environmental policy and natural resource management.

Jean Sideris is the climate campaign manager for the UCS Climate and Energy program. She connects experts with the public and policy makers to educate them on global warming science, impacts, and solutions and to advocate for strong action to reduce emissions.

The Union of Concerned Scientists puts rigorous, independent science to work to solve our planet's most pressing problems. Joining with citizens across the country, we combine technical analysis and effective advocacy to create innovative, practical solutions for a healthy, safe, and sustainable future.

More information about UCS and the Climate and Energy Program is available on the UCS website: www.ucsusa.org.

This report and an accompanying appendix containing the complete dossiers are available online (in PDF format) at www.ucsusa.org/decadesofdeception.

Designed by: Tyler Kemp-Benedict

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[CONTENTS]

iv	Figures
v	Acknowledgments
1	The Real Climate Hoax
	DECEPTION DOSSIER #1
6	Dr. Wei-Hock Soon’s Smithsonian Contracts
	DECEPTION DOSSIER #2
9	American Petroleum Institute’s “Roadmap” Memo
	DECEPTION DOSSIER #3
13	Western States Petroleum Association’s Deception Campaign
	DECEPTION DOSSIER #4
16	Forged Letters from the Coal Industry to Members of Congress
	DECEPTION DOSSIER #5
19	Coal’s “Information Council on the Environment” Sham
	DECEPTION DOSSIER #6
22	Deception by the American Legislative Exchange Council
	DECEPTION DOSSIER #7
25	The Global Climate Coalition’s 1995 Primer on Climate Change Science
28	Conclusion: Holding the Fossil Fuel Industry Accountable
30	References
36	Appendices

[FIGURES]

FIGURES

- 3 Figure 1. Half of Industrial Carbon Emissions Have Been Released Since 1988
- 4 Figure 2. Climate Change Widely Recognized by 1988
- 7 Figure 3. ExxonMobil Funded Wei-Hock Soon's Smithsonian Research
- 10 Figure 4. The American Petroleum Institute's 1998 Memo Presents a Roadmap
for Climate Deception
- 14 Figure 5. Presentation Slide Reveals Western States Petroleum Institute
Created Fake Grassroots Groups
- 17 Figure 6. Coal Industry Campaign Included Forged Letters to Congress
- 20 Figure 7. Internal Coal Memo Reveals Strategies to Undermine Climate Science
- 23 Figure 8. ALEC Hosts Climate Denier Joseph Bast at 2014 Annual Meeting
- 26 Figure 9. Fossil Fuel Companies' Own Scientists Warned About the Reality of
Climate Science

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U.S. Senator James Inhofe of Oklahoma, now chair of the U.S. Senate Committee on Environment and Public Works, has famously and repeatedly called climate change “a hoax.”

In addition to his frequent claims, Inhofe went so far as to bring a snowball onto the Senate floor to somehow illustrate his point (Inhofe 2015a; Inhofe 2012; Inhofe 2005; Inhofe 2003; Inhofe 1991a; Inhofe 1991b; Inhofe 1991c). Of course, Senator Inhofe fails to acknowledge the overwhelming evidence of global warming. The science has been clear for decades that the planet is rapidly warming and that emissions of heat-trapping gases from the burning of fossil fuels are largely to blame.

But Senator Inhofe is right about one thing: there *has* been a climate hoax that continues today. It is the decades’ long campaign by a handful of the world’s largest fossil fuel companies—such as Chevron, ConocoPhillips, ExxonMobil, and Peabody Energy—to deceive the American public by distorting the realities and risks of climate change, sometimes acting directly and sometimes acting indirectly through trade associations and front groups.

The internal documents collected and excerpted in this report tell the story of this deception. Disclosed to the public as recently as this year, the seven “deception dossiers” presented here tell an undeniable truth—that, for nearly three decades, major fossil fuel companies have knowingly worked to distort climate science findings, deceive the public, and block policies designed to hasten our needed transition to a clean energy economy.

Their tactics have included collusion, the use of front groups to hide companies’ influence and avoid accountability, and the secret funding of purportedly independent scientists. Companies’ front groups have even used forged letters,

claiming to be from nonprofits that advocate for the wellbeing of women, minorities, children, seniors, and veterans, to dissuade members of Congress from supporting much-needed climate legislation (see, for example, Miller 2009).

Deception Dossiers

This report presents seven “deception dossiers”—collections containing some 85 internal company and trade association documents that have either been leaked to the public, come to light through lawsuits, or been disclosed through Freedom of Information Act (FOIA) requests. While many of these documents have been analyzed by others (Oreskes 2011; Oreskes and Conway 2010; Gelbspan 1998), these dossiers offer the most complete and up-to-date collection yet available. Excerpts of the documents are provided in the report’s appendices; the complete dossiers—totaling some 336 pages—are available online.

Each collection of internal documents reviewed here reveals a separate glimpse of a coordinated campaign underwritten by the world’s major fossil fuel companies and their allies to spread climate misinformation and block climate action. The campaign began decades ago and continues today.

The fossil fuel industry—like the tobacco industry before it—is noteworthy for its use of active, intentional disinformation and deception to support its political aims and maintain its lucrative profits. The following case studies show that:

- **Fossil fuel companies have intentionally spread climate disinformation for decades.** The roots of the fossil fuel companies' deception and disinformation run deep. Internal documents dating back to the early 1990s show a series of carefully planned campaigns of deception organized by companies and by trade groups representing the industry. As the scientific evidence concerning climate change became clear, some of the world's largest carbon producers—including BP, Chevron, ConocoPhillips, ExxonMobil, Peabody Energy, and Shell—developed or participated in campaigns to deliberately sow confusion and block policies designed to reduce the heat-trapping emissions that cause global warming.
- **Fossil fuel company leaders knew that their products were harmful to people and the planet but still chose to actively deceive the public and deny this harm.** The letters, memos, and reports in the dossiers show that company executives have known for at least two decades that their products—coal, oil, and natural gas—cause harm to people and the climate.
- **The campaign of deception continues today.** With documents made public as recently as 2014 and 2015, the evidence is clear that a campaign of deception about global warming continues to the present. Today, most major fossil fuel companies acknowledge the main findings of climate science. Many even say they support policies to cut emissions. And yet, some of these same companies continue to support groups that spread misinformation designed to deceive the public about climate science and climate policy.

Taken together, these documents build a case for why these companies must stop sowing doubt and blocking

These documents build a case for why these companies must stop sowing doubt and must be held accountable for their share of responsibility for global warming.

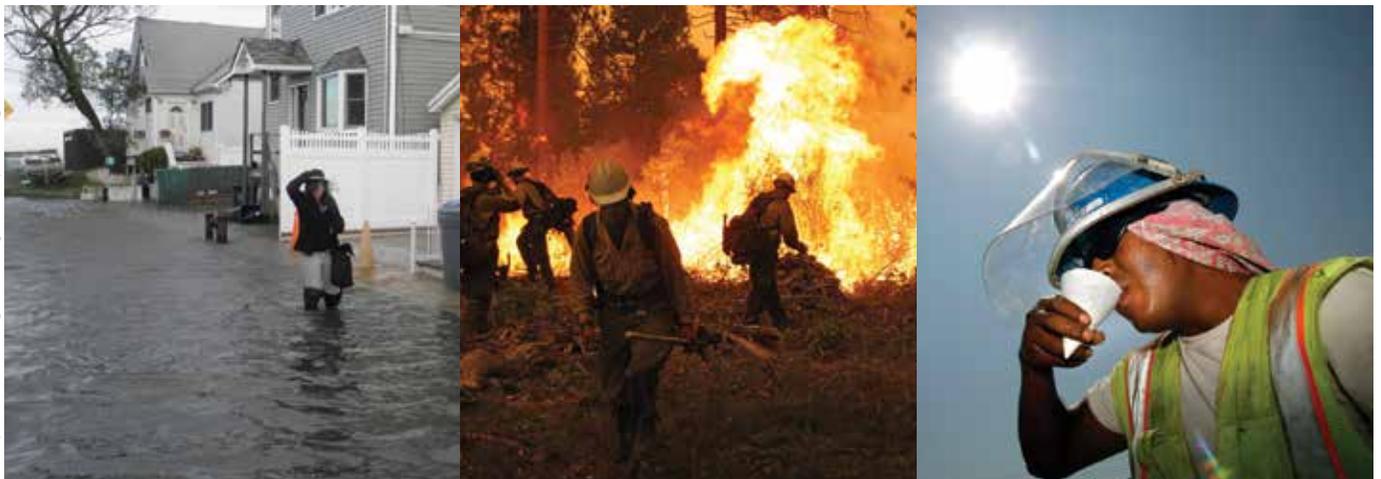
progress, and must be held accountable for their share of responsibility for global warming and the damages already underway.

Undeniable Climate Impacts

Today, global warming is already having harmful effects on our communities, our health, and our economy. These consequences will only intensify as the planet's temperature continues to rise. Communities, people, and businesses are now facing impacts including:

- **Rising sea level.** Global warming is accelerating the rate of sea level rise and dramatically increasing coastal flooding risks.
- **Longer and more damaging wildfire seasons.** In the dry season in many parts of the world and in drought-prone regions, wildfire risks are increasing and wildfire seasons are getting longer as global temperatures rise.

Left: © Peter Mahon/West 12th Road Block Association; center: © U.S. Forest Service/Mike McMillan; right: © iStockphoto.com/Chris Rogers



Climate impacts are intensifying around the world. Left: A New York student wades through an extreme high tide in Broad Channel, NY. Center: Crews fight a wildfire in California's Stanislaus National Forest. Right: A construction worker struggles to keep cool during a heat wave.

- **Costly and growing health impacts.** Climate change has serious implications for our health, including increased air pollution and high temperatures that can lead to dehydration, heat exhaustion, and deadly heat stroke.
- **Heavier precipitation and more extreme flooding.** As temperatures increase, more rain falls during the heaviest downpours, increasing the risk of floods.
- **More frequent and intense heat waves.** Dangerously hot weather occurs more frequently than it did 60 years ago, and heat waves have gotten hotter.

Climate scientists have documented that global warming is happening and that fossil fuel emissions are the primary cause. A wealth of scientific evidence shows that the above impacts are primarily the result of increased levels of heat-trapping carbon dioxide in the atmosphere—carbon that can be traced back to the fuels (coal, oil, and natural gas) that fossil fuel companies have extracted and brought to market. A key question becomes: What responsibility do the major fossil fuel companies hold for these damaging impacts? The answer requires a closer look at some key facts about the industry.

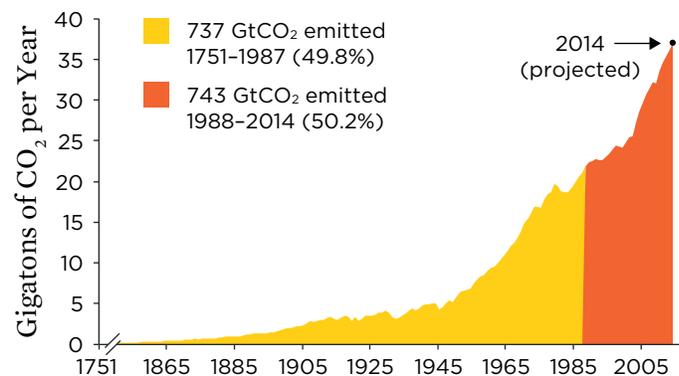
A Concentrated Industry

The extraction, refining, and distribution of fossil fuels is an enormous industry worldwide. The global oil and gas sector alone has annual revenues of roughly \$4 trillion (IBISWorld 2015). Five of the top six companies in the Fortune Global 500 are in the petroleum refining industry—including BP, ExxonMobil, and Shell (Fortune 2015). Meanwhile, Peabody Energy, the world’s largest publicly traded coal company, boasted annual revenues approaching \$7 billion in 2014 (Peabody Energy 2014).

The fossil fuel industry’s concentration is as notable as its size. According to a recent study, just 90 companies have produced and marketed the fossil fuels and cement (an industrial product with very high carbon intensity) responsible for almost two-thirds of the world’s industrial heat-trapping carbon emissions over the past two and a half centuries. Of these, 50 are investor-owned coal, oil, and natural gas companies and include BP, Chevron, ConocoPhillips, ExxonMobil, Peabody, and Shell. Indeed, nearly 30 percent of all industrial emissions since 1850 can be traced to just 20 investor- and state-owned companies (Heede 2014).

In a rapidly industrializing world, the rate of emissions has sped up dramatically: more than half of all industrial carbon emissions have been released into the atmosphere since 1988, *after* major fossil fuel companies indisputably knew about the harm their products were causing to the climate (Figure 1).

FIGURE 1. Half of Industrial Carbon Emissions Have Been Released Since 1988



Although the Industrial Revolution began more than 250 years ago, more than half of all industrial carbon emissions have been released since 1988—after major fossil fuel companies knew about the harm their products were causing.

SOURCES: FRUMHOFF ET AL. (IN REVIEW) BASED ON LE QUÉRÉ ET AL. 2014; BODEN, MARLAND, AND ANDRES 2013.

What Fossil Fuel Companies Knew and When They Knew It

The fundamentals of global warming have been well established for generations. The idea that heat-trapping emissions could alter our climate dates back to the late 1800s (Weart 2015).

By the 1950s, scientists knew that climate change could present significant risks to people and places (Weart 2015; Craig 1957; Revelle and Seuss 1957). In 1965, the highly respected oceanographer Roger Revelle explained in a report prepared for the President’s Science Advisory Committee that increasing amounts of carbon dioxide could be trapped in the atmosphere and function “much like the glass in a greenhouse, to raise the temperature of the lower air” (Revelle 1965).

In 1965, President Lyndon Johnson warned about the potential dangers of a changing climate. In a special message to Congress, he said: “Air pollution is no longer confined to isolated places. This generation has altered the composition of the atmosphere on a global scale through radioactive materials *and a steady increase in carbon dioxide from the burning of fossil fuels*” (Johnson 1965; emphasis added). By 1969, Charles Keeling, a scientist whose careful measurements of carbon dioxide in the atmosphere are still considered among the most respected sources of climate science data, reported: “I believe that no atmospheric scientist doubts that a sufficiently large change in atmospheric CO₂ would change the climate” (Keeling 1969).

The major fossil fuel companies were likely aware of all of these developments. Evidence shows that from as early as 1977 representatives of fossil fuel companies including BP, Chevron, ConocoPhillips, ExxonMobil, Peabody Energy, and Shell attended dozens of congressional hearings in which the contribution of carbon emissions to the greenhouse effect and other aspects of climate science were discussed (Davies 1990; Gifford 1990; Greenpeace 1990; Lashof 1990; Beyaert 1989; Chafee 1989; Tucker 1988; Evans 1987; Walsh 1987; The Wilderness Society 1987; MacDonald 1985; Schneider 1985; Sharp 1985; Sherick 1984; Longenecker 1981; Oppenheimer 1981; Commoner 1977).

By 1983, the U.S. Environmental Protection Agency (EPA) had begun assessing potential policy solutions to the risks that climate change presented, based on the growing body of science on climate change and its impacts (Seidel and Keyes 1983). In 1988, Richard F. Tucker, then president of Mobil Oil, acknowledged in a speech to the American Institute of Chemical Engineers (a speech that was subsequently submitted as testimony to Congress) that environmental protection

and pollution prevention, including action to address the greenhouse effect, might require “a dramatic reduction in our dependence on fossil fuels” (Tucker 1988).

The year 1988 marked an important milestone for scientific certainty concerning climate change. In that year James Hansen, a leading climate scientist and director of the Institute for Space Studies at the National Aeronautics and Space Administration (NASA), testified before Congress that scientific data had confirmed humans’ role in climate change (Figure 2). It was also in 1988 that the United Nations formed the Intergovernmental Panel on Climate Change (IPCC) and the U.S. Congress introduced the National Energy Policy Act of 1988 in an effort to reduce emissions of heat-trapping gases. By that year, the well-established science of global warming was making front-page headlines; the issue had moved from the scientific community to the national stage. It is difficult to imagine that executives, lobbyists, and scientists at the major fossil fuel companies were by this time unaware of the robust scientific evidence of the risks associated with the continued burning of their products.

FIGURE 2. Climate Change Widely Recognized by 1988

"All the News
That's Fit to Print"

The New York Times

Late Edition
New York: Today, sunny, cool. High 74-79. Tonight, increasing clouds. Low 57-65. Tomorrow, morning clouds, then windy and warmer. High 79-88. Yesterday: High 87, low 67. Details, page A18.

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50 cents beyond 25 miles from New York City. **30 CENTS** outside the United States.

Global Warming Has Begun, Expert Tells Senate

Global Warming: Greenhouse Effect?

Average global temperatures through the first five months of 1988. As a baseline, scientists use the global average from 1950 to 1980.

Source: James E. Hansen and Sergej Lebedeff

The New York Times/June 24, 1988

Sharp Cut in Burning of Fossil Fuels Is Urged to Battle Shift in Climate

By PHILIP SHABECOFF
Special to The New York Times

WASHINGTON, June 23 — The earth has been warmer in the first five months of this year than in any comparable period since measurements began 130 years ago, and the higher temperatures can now be attributed to a long-expected global warming trend linked to pollution, a space agency scientist reported today.

Until now, scientists have been cautious about attributing rising global temperatures of recent years to the predicted global warming caused by pollutants in the atmosphere, known as the “greenhouse effect.” But today Dr. James E. Hansen of the National Aeronautics and Space Administration told a Congressional committee that it was 99 percent certain that the warming trend was not a natural variation but was caused by a buildup of carbon dioxide and other artificial gases in the atmosphere.

An Impact Lasting Centuries

Dr. Hansen, a leading expert on climate change, said in an interview that there was no “magic number” that showed when the greenhouse effect was actually starting to cause changes in climate and weather. But he added, “It is time to stop waffling so much and say that the evidence is pretty strong that the greenhouse effect is here.”

If Dr. Hansen and other scientists are correct, then humans, by burning of fossil fuels and other activities, have altered the global climate in a manner that will affect life on earth for centuries to come.

Dr. Hansen, director of NASA’s Institute for Space Studies in Manhattan, testified before the Senate Energy and Natural Resources Committee.

Some Dispute Link

He and other scientists testifying before the Senate panel today said that projections of the climate change that is now apparently occurring mean that the Southeastern and Midwestern sections of the United States will be subject to frequent episodes of very high temperatures and drought in the next decade and beyond. But they cautioned that it was not possible to attribute a specific heat wave to the greenhouse effect, given the still limited state of

Continued on Page A14, Column 3

By 1988, climate change was a well-established scientific fact, and widely acknowledged in the public sphere, as exemplified by this front-page story in The New York Times reporting on Dr. James Hansen’s testimony before Congress.

There is ample evidence demonstrating what companies did know. Exxon, for example, had a staff scientist serve as an expert reviewer for the first IPCC scientific assessment on climate change, published in 1990 (IPCC 1990). The industry's own scientists were internally warning of climate dangers by the mid-1990s, as evidenced by a leaked draft document by a team headed by a scientist at Mobil that was distributed to other major fossil fuel companies in 1995 (Figure 8, p. 26, Appendix G, p. 44). As that internal document from 1995 unequivocally states: "The scientific basis for the Greenhouse Effect and the potential impact of human emissions of greenhouse gases such as CO₂ on climate

is well established and cannot be denied" (Bernstein 1995; emphasis added).

Nonetheless, despite what fossil fuel companies knew about the harm their products were causing, some of the world's largest fossil fuel companies continued to engage in an active campaign to deny the science, deceive the public, and delay action, rather than acknowledge the science publicly or change their business models and lobbying goals to be consistent with the urgent need to work toward a lower-carbon economy.

The case studies that follow, spanning decades, offer an illuminating inside look at this ongoing campaign of deception.

Dr. Wei-Hock Soon's Smithsonian Contracts

Documents released in February 2015 reveal the extent to which ExxonMobil and other powerful fossil fuel interests secretly funded a purportedly independent contrarian climate scientist for more than a decade. (Figure 3 and Appendix A, p. 36) What's worse, this happened at the Smithsonian Institution, one of America's oldest and most respected scientific research organizations.

The documents, obtained through a FOIA request by Greenpeace and the Climate Investigations Center, show that Wei-Hock ("Willie") Soon received more than \$1.2 million in research funding between 2001 and 2012 from fossil fuel interests including ExxonMobil, the American Petroleum Institute (API), the Charles Koch Foundation, and Southern Company, a large electric utility in Atlanta that generates most of its power from coal. Soon, whose background is not in climate science but rather in aerospace engineering, has long used his affiliation with the Harvard-Smithsonian Center for Astrophysics to add credence to his climate-related research. Soon has written about many aspects of climate change but is best known for his work on the role of solar variability, research that has broadly overstated the role the sun plays in climate change and has been largely discredited by his scientific peers (see, for example, Mooney 2015; Schmidt 2015; Schmidt 2005; Sanchez 2003). Outcry from the climate science community over a 2003 paper published by Soon in *Climate Research* even resulted in the resignation of several of the journal editors and an admission by the journal's publisher that the paper should not have been accepted (von Storch 2003).

A Corporate Intent to Deceive

In response to the Soon revelations, the Smithsonian Institution has launched an investigation into its disclosure and funding policies. As the contracts, proposals, reports, letters, and other documents reveal, Soon relied exclusively on grants from the fossil fuel industry for his entire salary and research budget (Gillis and Schwartz 2015; Smithsonian 2015). Particularly troubling, the Smithsonian Institution entered into funding agreements that gave Soon's funders the right to review his scientific studies before they were published. The documents also show that the Smithsonian agreed not to disclose the funding arrangement without the funder's permission (Smithsonian 2008). Soon reported his research articles and even his congressional testimony to his corporate underwriters as "deliverables" (McNeil 2011; Soon 2011). While requirements for disclosing funding sources vary among disciplines and institutions, scientists generally expect one another to be transparent about their funding sources and to uphold scientific integrity by ensuring that funders do not interfere with or pre-determine research results.

The released documents clearly show a corporate intent to deceive. Although Soon's research methodology and conclusions have been widely criticized and discredited by his scientific peers (see, for example, Schmidt 2015; IPCC 2007; Schmidt 2005), ExxonMobil and Southern Company clearly saw value in directly—and secretly—funding Soon. Politicians and interest groups backed by the fossil fuel industry have promoted Soon's work for years to spread doubt about the

FIGURE 3. ExxonMobil Funded Wei-Hock Soon's Smithsonian Research

SMITHSONIAN INSTITUTION
Tracking # 2008 - 400000 - 00032
TRANSMITTAL FORM FOR GIFTS & PROMISES TO GIVE

DATE OF GIFT: 6-11-08
CASH: \$
CHECK: \$76,106.00
CREDIT CARD: \$
DISCOVER VISA/MC AMEX

CHARTFIELDS: SPLIT FUNDED SEE BELOW

Fund	Budget Ref	Designated Code	Dept. ID	Account	Class	Program	Project ID	Activity ID	Amount
				Unrestricted Designated (5604)					
				Permanently Restricted (5603)					
				Temporarily Restricted (5602)					
				Unrestricted (5601)					
				Endowment Pledge Payments (1315)					

DONOR INFORMATION
DONOR NAME: EXXON MOBIL CORPORATION
MAILING ADDRESS: HOME P.O. BOX 2516, HOUSTON, TX 77252-2516
PURPOSE/PROJECT: TO SUPPORT "UNDERSTANDING SOLAR VARIABILITY AND CLIMATE CHANGE", DR. WILLIE SOON, P.I.
NAME OF PERSON WHO RECEIVED FUNDS: AMANDA PRESTON

SECURITIES INFORMATION
STOCK/SBND NAME

SMITHSONIAN INSTITUTION
Tracking # 2008-000000-00016
TRANSMITTAL FORM FOR GIFTS & PROMISES (PLEDGES) TO GIVE
(Note: All payments from external sources deposited to 802/803 grant and contract funds must be routed on a CRV through OSP.)

DATE OF GIFT: 3-17-09
CASH: \$
CHECK: \$76,106.00
CREDIT CARD: \$
DISCOVER VISA/MC AMEX
OTHER: \$
PLEDGES: W/PRES STOCK (PROCESS) GIFT IN KIND

GIFT CHARTFIELD: SPLIT FUNDED

Fund	Budget Ref	Designated Code	Dept. ID	Account	Class	Program	Project ID	Activity ID	Amount
801	0000	301770	404550	Unrestricted Designated (5604)	0302	4210	40301770IS5000	DEFAULT	\$53,825.00
801	0000	301770	404550	Temporarily Restricted (5602)	0302	8700	40301770IS50AP	DEFAULT	\$22,181.00

QUO PRO QUO CHARTFIELD (Complete ONLY for Non Tax Deductible Benefits associated with a Gift)

Fund	Budget Ref	Designated Code	Dept. ID	Account	Class	Program	Project ID	Activity ID	Amount

DONOR INFORMATION
DONOR NAME: EXXON MOBIL CORPORATION
MAILING ADDRESS: HOME P.O. BOX 2516, HOUSTON, TEXAS 77252-2516
PURPOSE/PROJECT: TO SUPPORT "UNDERSTANDING SOLAR VARIABILITY AND CLIMATE CHANGE", DR. WILLIE SOON, P.I.
NAME OF PERSON WHO RECEIVED FUNDS: AMANDA PRESTON
DATE BY RECEIVED GIFT/PLEDGE: 4/2/09

SECURITIES INFORMATION
STOCK/SBND NAME

ExxonMobil paid more than \$300,000 to fund Wei-Hock “Willie” Soon’s purportedly independent contrarian climate science research at the Harvard-Smithsonian Astrophysical Observatory between 2005 and 2010, according to documents recently obtained through the Freedom of Information Act by Greenpeace and the Climate Investigations Center. Most of Soon’s research funding—amounting to more than \$1.2 million between 2001 and 2012—came from fossil fuel interests.

role of human-caused emissions in climate change. Senator Inhofe (OK), for instance, prominently mentions Soon’s work on his U.S. Senate website in a section on the “facts and science of climate change” (Inhofe 2015b). From the start, despite the covert funding, Soon sought to portray his research as independent, and his affiliation with the Harvard-Smithsonian Center for Astrophysics has lent it an air of credibility; the fact that he was paid by fossil fuel interests was never publicly disclosed in his published work or testimony to lawmakers. According to the *New York Times*, at least 11 papers published by Soon since 2008 omit any disclosure of this clear conflict of interest (Gillis and Schwartz 2015).

After Soon’s secret ties to the fossil fuel industry were made public, the Smithsonian Institution

launched an ethics investigation in February 2015 (Smithsonian 2015). Southern Company also announced that it will no longer fund Soon’s work after his 2015 contract ends (Hasemyer 2015).

A Pattern of Deception

The revelations about Soon’s funding arrangement have raised renewed suspicions that fossil fuel interests have covertly funded other key, purportedly “independent” researchers who continue to vocally challenge climate science in an effort to manufacture uncertainty where there is broad consensus.

Soon sought to portray his research as independent; the fact that he was paid by fossil fuel interests was never publicly disclosed.

Some elements of Soon's secret contract strongly suggest that it is part of a broader pattern of deception. Starting in 2005, more than \$400,000 of Soon's funding came from a subsidiary of Southern Company. In the funding arrangement, Southern Company was represented by Robert Gehri, a fossil fuel industry operative with a long history of promoting misinformation about climate science (Smithsonian 2008). In 1998, Gehri was one of the authors of an infamous memo outlining the API's plans to spread misinformation about climate science by supporting scientists who would emphasize cherry-picked messages of uncertainty (Figure 4, p. 10 and Appendix B, p. 38), precisely what fossil fuel interests were doing in their secret arrangement with Soon (Walker 1998).

As the released documents from the Soon-Smithsonian contract show, Gehri was instrumental in steering money toward Soon. A \$60,000 contract on behalf of Soon between Southern Company and the Harvard-Smithsonian Astrophysical Observatory in 2008, for instance, identifies Gehri as the key point of contact with the company (Smithsonian 2008). Between 2005 and 2012, Southern Company gave almost \$350,000 to fund Soon's controversial work on climate change. ExxonMobil, Koch Industries, and Donors Trust (a so-called "dark money" group that does not reveal its funders) are also known to have supported contrarian research at the Smithsonian and elsewhere. According to one in-depth study, Donors Trust—which has received millions of dollars from Koch foundations—distributed at least \$80 million between 2004 and 2013 to groups—including the

Heartland Institute, Americans for Prosperity, and the Committee for a Constructive Tomorrow—that deny the science and impacts of human-caused climate change and the need to cut global warming emissions. (DeSmogBlog 2015; Brulle 2014; VanderHeyden 2013; Ball 2012; Ball 2010).

Today, major fossil fuel companies tend to publicly acknowledge the basics of climate science, and many even say they support policies to address global warming, such as establishing a price on carbon. And yet, as the Soon-Smithsonian dossier illustrates, some fossil fuel companies are still covertly supporting efforts to spread misinformation about climate science as well as climate policy. While companies are required to publicly report their contributions to political campaigns and their lobbying spending, companies' funding of public relations firms and nonprofit organizations is more opaque.

Through deceptive arrangements such as the ones that ExxonMobil, Southern Company, and others negotiated in the Soon-Smithsonian contracts, fossil fuel companies have actively worked to mislead the American public about the overwhelming extent of agreement about human-caused climate change by experts in the field. In so doing, these fossil fuel interests closely mimic the strategy pioneered by the tobacco industry when it surreptitiously funded misleading public health research that questioned the health risks of smoking. The specifics of Soon's arrangement with the Smithsonian were exposed in 2015, yet, as the next case study shows, active deception by the fossil fuel industry stretches back more than two decades.

American Petroleum Institute's “Roadmap” Memo

Among the most revelatory documents to have emerged about the fossil fuel companies' campaign of deception is an internal strategy document written in 1998, a roadmap memo outlining the fossil fuel industry's plan to use scientists as spokespersons for the industry's views (Figure 4, p. 10 and Appendix B, p. 38). The memo was written by a team convened by the API, the country's largest oil trade association whose member companies include BP, ConocoPhillips, Chevron, ExxonMobil, and Shell. The innocuously titled “Global Climate Science Communications Plan,” written with the direct involvement of fossil fuel companies including ExxonMobil (then Exxon) and Chevron, details a plan for dealing with climate change that explicitly aimed to confuse and misinform the public.

Articulating an Accurate Understanding of Climate Science

The API's Global Climate Science Communications Team consisted of representatives from the fossil fuel industry, trade associations, and public relations firms. At the time, the team's attention was focused on derailing the Kyoto Protocol—the international agreement committing participating countries to binding emissions reductions—that had been adopted by the Parties to the United Nations Framework Convention on Climate Change in December 1997. In response to this development, and to stave off approval of the treaty by the U.S. Senate and other climate action in the United States, the API team's 1998 memo mapped out a multifaceted deception strategy for the fossil fuel industry

that continues to this day—outlining plans to reach the media, the public, and policy makers with a message emphasizing “uncertainties” in climate science.

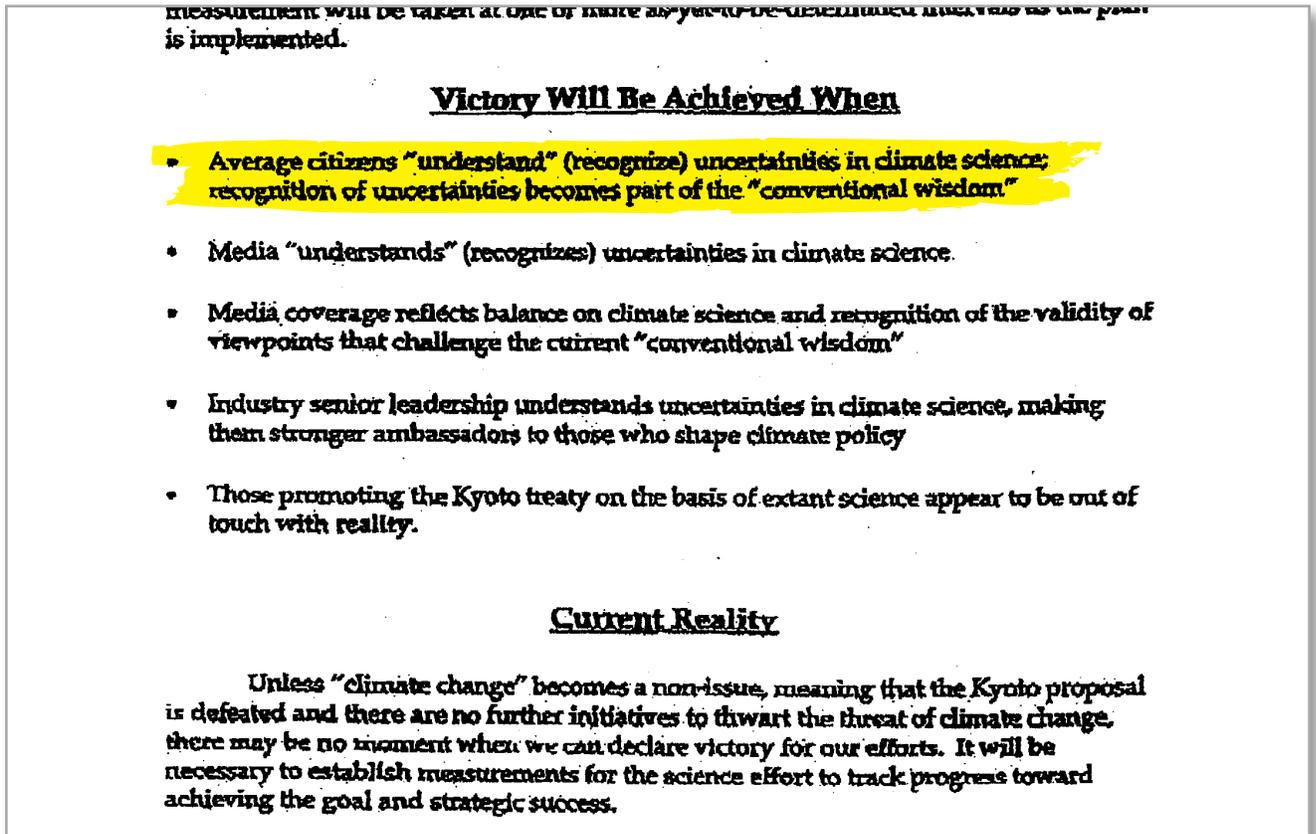
According to the memo (Figure 4, p. 10), “victory” would be achieved for the campaign when “average citizens” and the media were convinced of “uncertainties” in climate science despite overwhelming evidence of the impact of human-caused global warming and nearly unanimous agreement about it in the scientific community.

The timing of this document—1998—is important to note, as an earlier internal memo from 1995 shows that Mobil's own climate scientist had informed the industry that global warming was undeniable (Figure 8, p. 26 and Appendix G, p. 44). Thus, this memo cannot be interpreted as a legitimate call for “balance” in the understanding of climate change.

In fact, the words eerily echo the strategy developed and implemented by the large tobacco companies to deceive the public about the hazards of smoking and to forestall governmental controls on tobacco consumption. As an infamous internal memo from the Brown and Williamson tobacco company put it: “Doubt is our product, since it is the best means of competing with the ‘body of fact’ that exists in the minds of the general public” (B&W 1969).

The fossil fuel companies, mimicking the tobacco companies, adopted a strategy that sought to “manufacture uncertainty” about global warming even in the face of overwhelming scientific evidence that it is human-caused, is accelerating at an alarming rate, and poses myriad public health and environmental dangers. The fossil fuel industry not only took a page from the tobacco playbook in its efforts to defeat action on climate change, it even drew upon a

FIGURE 4. The American Petroleum Institute’s 1998 Memo Presents a Roadmap for Climate Deception



A team convened in 1998 by the American Petroleum Institute—the country’s largest oil trade association whose member companies include BP, Chevron, ConocoPhillips, ExxonMobil, and Shell—outlined a “roadmap” for climate deception including a plan to cultivate purportedly independent scientists as climate misinformers. The campaign would achieve “victory,” according to the memo, when “average citizens” believed that the realities of climate science were uncertain.

number of the key players who had contributed to the tobacco industry’s deception campaign and a remarkably similar network of public relations firms and nonprofit “front groups,” some of whom continue to actively sow disinformation about global warming today (Oreskes and Conway 2010; Hoggan and Littlemore 2009).

Identifying, Recruiting, and Training Undercover Scientists

Given that scientists are a trusted source of information for policy makers and the public, it is not surprising that the API roadmap memo calls for cultivating and deploying them. Importantly, the API’s communication team realized that scientists seen as spokespeople for the fossil fuel industry

would lack credibility. They aimed to “identify, recruit and train a team of five independent scientists to participate in media outreach,” and their deception depended on ensuring

Recognizing that the tide might turn against fossil fuels, the API pushed out materials for teachers and their students that directly countered scientific evidence.

that these scientists' financial ties to the fossil fuel industry remained hidden from the public—precisely the arrangement they ultimately made with Dr. Wei-Hock Soon (Dossier #1, p. 6). According to the leaked memo, “These will be individuals who do not have a long history of visibility and/or participation in the climate change debate. Rather, this team will consist of new faces who will add their voices to those recognized scientists who are already vocal” (Walker 1998).

While the funding of the hand-selected scientists was to remain secret, their intended mission was clear: Exxon, Chevron, and the other fossil fuel industry representatives needed these scientists to produce “peer-reviewed papers that undercut the ‘conventional wisdom’ on climate science.” They intended to fund and train the scientists to get their crafted message of uncertainty out to print, radio, and TV journalists (Walker 1998).

Targeting Teachers and Students

Another section of the API roadmap memo outlines a plan to target the National Science Teachers Association. Exxon, Chevron, and the other Global Climate Science Communications Team members recognized that the tide might turn against fossil fuels unless they could reach the next generation. So, under the guise of “present[ing] a credible, balanced picture of climate science,” they opted to push out materials for teachers and their students that directly countered the scientific evidence. As the memo explains, their assumption was that emphasizing “uncertainties in climate science will begin to erect a barrier against further efforts to impose Kyoto-like measures in the future” (Walker 1998).

The leaked memo also outlines a tactic of working through grassroots organizations to promote debate about climate science on campuses and in communities during the period mid-August through October 1998 (Walker 1998). In the years since this memo, many of the activities outlined in the memo have been carried out, as evidenced by the API's online curriculum for elementary schools that presents non-renewable energy sources such as oil, natural gas, and coal, as “more reliable, affordable, and convenient to use than most renewable energy resources” (see, for example, API 2002).

Fossil Fuel Company Involvement: Direct and Indirect

Fossil fuel companies contributed to the campaign indirectly, through their membership in and funding of the API, and directly, through the participation of their own employees.

Joseph Walker of the API facilitated the process, and the largest fossil fuel companies were implicated in this memo. BP, ConocoPhillips, and Shell were members of the API at the time. Along with ExxonMobil and Chevron, all these firms remain API members today. Exxon and Chevron contributed directly to the development of the plan through their representatives Randy Randol and Sharon Kneiss, respectively. Exxon, Chevron, and Occidental Petroleum also exerted influence through a team member, Steve Milloy, who was the executive director of a front group, called The Advancement of Sound Science Coalition, funded by these companies. (Milloy had previously aided tobacco firms with their deception campaign (Walker 1998).)

BP and Shell, among other fossil fuel companies, indirectly supported this deception campaign via their API memberships. It is noteworthy that these companies began to publicly acknowledge the threat of climate change around this time. Shell, for example, publicly acknowledged in its 1998 corporate sustainability report that rising global temperatures were “possibly due in part to greenhouse gas emissions caused by human activity.” The report also noted that “human activities, especially the use of fossil fuels, may be influencing the climate, according to many scientists, including those who make up the Intergovernmental Panel on Climate Change” (Royal Dutch Shell 1998). Despite such comments, however, fossil fuel companies' broader campaign to sow confusion continued.

Funding the Campaign

The fossil fuel companies knew that a disinformation campaign of the scope they intended would not be cheap. The Global Climate Science Communications Team estimated the budget for the program at \$5,900,000, which included a national media program and national outreach as well as a data center (Walker 1998). The roadmap identified an array of fossil fuel industry trade associations and front groups, fossil fuel companies, and free-market think tanks to underwrite and execute the plan, including:

- The American Petroleum Institute and its members
- The Business Round Table and its members
- The Edison Electric Institute and its members
- The Independent Petroleum Association of America and its members
- The National Mining Association and its members
- The American Legislative Exchange Council
- Committee for a Constructive Tomorrow

- The Competitive Enterprise Institute
- Frontiers of Freedom
- The Marshall Institute

The API Today: Still Fueling Uncertainty

The trade association continues its misinformation efforts today. For instance, since October 2002, the API has carried out its plan to distribute curriculum materials that question the established science through the National Science Teachers Association by maintaining the website Classroom Energy!, which offers lesson plans and materials for teachers of kindergarten through high school (API 2002). Additionally, the API funded now well-known contrarian scientists such as Wei-Hock Soon (Dossier #1, p. 6), whose work sought to discredit the scientific evidence of human-caused climate change (Mooney 2004). In 2009, the API attempted to undermine the American Clean Energy and Security Act of 2009—often known as the Waxman-Markey climate bill and a key federal attempt to regulate carbon emissions—by mobilizing

front groups to hold staged “energy citizens” rallies in roughly 20 states, rallies designed to suggest that there was significant public opposition to regulating carbon emissions where little actually existed (Gerard 2009; Talley 2009). An API memo leaked to Greenpeace reveals that API urged fossil fuel company executives, including from BP, Chevron, Exxon-Mobil, and Shell, to send their employees to the staged rallies (Center for Media and Democracy 2012; Gerard 2009).

More recently, in 2011, the API protested the EPA’s decision to regulate carbon pollution under the Clean Air Act, joining a coalition of industry groups to file a lawsuit challenging the EPA’s authority to regulate global warming emissions. The API’s lawsuit challenged the EPA on the grounds of the very doubts about climate science the trade group had worked for years to manufacture, stating that the “EPA professes to be 90–99% certain that anthropogenic emissions are mostly responsible for ‘unusually high current planetary temperatures,’ but the record does not remotely support this level of certainty” (Coalition for Responsible Regulation, et al., v. EPA 2010).

Western States Petroleum Association's Deception Campaign

Internal documents have shown that a key component of the major fossil fuel companies' deception campaign about climate change has been the cultivation of so-called "astroturf" organizations, groups created to falsely represent grassroots opposition to forward-looking policy on climate change and renewable energy.

These activities have rarely been revealed as starkly as in a presentation leaked in 2014 from the Western States Petroleum Association (WSPA), the top lobbyist for the oil industry in the western United States and the oldest petroleum trade association in the country (Figure 5, p. 14 and Appendix C, p. 39).

The Sacramento-based WSPA counts among its members BP, Chevron, ExxonMobil, Shell, Occidental, and other major fossil fuel companies. The group serves as a key organizer of opposition to California's groundbreaking climate policies, including the state's low-carbon fuel standard and its so-called AB32 plan that requires a sharp reduction in carbon emissions by 2020. Between January 2009 and September 2014, oil companies spent more than \$26.9 million through WSPA directly lobbying in California (Bacher 2014). Chevron

alone reported spending nearly \$14 million (Bacher 2015; California Secretary of State 2015).

But what makes the leak of the WSPA presentation especially noteworthy is the glimpse it offers of the extent of the fossil fuel companies' deceptive practices.

The Illusion of Grassroots Opposition

The presentation was delivered by WSPA President Catherine Reheis-Boyd to the Washington Research Council, a business group, and was subsequently leaked to Bloomberg Businessweek (Wieners 2014). In it, Reheis-Boyd explains WSPA's plan to "activate" a "significant number of campaigns and coalitions." As a presentation slide obliquely explains, WSPA "invested in several coalitions that are best suited to drive consumer and grassroots messages to regulators and policymakers."

In all, Reheis-Boyd showcased a total of 16 fake-grassroots groups and campaigns orchestrated and funded by WSPA and its allies. Among these astroturf coalitions were groups with names such as Fed Up at the Pump, the California Drivers Alliance, Californians Against Higher Taxes, and Oregonians for Sound Fuel Policy.

In addition to WSPA's direct lobbying on behalf of the fossil fuel companies, the group planned to use this network of front groups—some of which WSPA created out of whole cloth—to counter California's state climate and energy policy. The groups were designed to sound like grassroots public interest groups (Wieners 2014). But, in truth, they were little more than channels through which the fossil fuel companies could exaggerate the extent of popular support for

In addition to direct lobbying, WSPA planned to use this network of front groups to counter California's state climate and energy policy.

FIGURE 5. Presentation Slide Reveals Western States Petroleum Institute Created Fake Grassroots Groups



A leaked slide from a 2014 presentation by the Western States Petroleum Association demonstrates the organization's strategy, on behalf of its member fossil fuel companies, to use a network of 16 different front groups—many masquerading as citizen-led organizations—to challenge climate policies on the West Coast.

its positions undermining action on climate change. Through these groups, the industry attempted to create the impression of a consumer backlash against climate legislation.

Recent filings with the California secretary of state show that WSPA nearly doubled its lobbying budget in 2014—the year of Reheis-Boyd's presentation—to nearly \$8.9 million. Equally revealing, the vast majority of this spending—some \$7.2 million—was reported under a catchall “other” category that requires no detailed disclosure about how the money was spent. The leaked presentation slide strongly suggests where much of this money went: to create and promote astroturf groups (Rosenhall 2015).

Undermining Public Discourse

WSPA's tactics are clearly designed to undermine authentic public discourse, especially given that California boasts a roughly 70 percent voter approval on clean energy issues. Concerns are raised by groups of purportedly everyday citizens when, in fact, they are disguised messages from fossil fuel companies seeking to undermine climate legislation.

At least two of the front groups set up by WSPA—California Driver's Alliance and Fed Up at the Pump—launched aggressive public relations campaigns in 2014, including radio ads and billboards. Their efforts were credited with

helping to convince 15 Democrats in the California Assembly to argue in June 2014 that the policy placing transportation fuels under the state’s carbon cap should be postponed. Ultimately, the groups’ efforts failed, and transportation fuels were included in the emissions limits set up by the state. The fabricated Fed Up at the Pump group still has a Facebook page that bills itself as “a grassroots coalition of consumers, businesses, and advocates” concerned about gas prices (Fed Up at the Pump 2015). The portrayal is badly undercut, however, when a click on the link describing the mission of the group redirects the visitor, inadvertently or not, to the website of the California Independent Oil Marketers Association (CIOMA 2015).

Even though WSPA’s efforts in California were unsuccessful, the organization has adopted a regional approach, aware that nearby states are watching California closely.

While working to dismantle California’s policies, WSPA is also active in Washington and Oregon—states that are also debating aggressive carbon emissions reduction policies—through groups such as Washington Consumers for Sound Fuel Policy and Oregon Climate Change Campaign (Wieners 2014).

After the details of WSPA’s presentation were leaked, Reheis-Boyd defended WSPA’s use of front groups by euphemistically calling them “partnerships.” As she put it: “The fact we are engaged in partnerships with a large array of business and consumer coalitions isn’t a secret to anyone familiar with our active engagement on behalf of our members in all of the states for which we are responsible.” She suggested that WSPA’s actions were transparent, while charging—with no trace of irony—that its opponents “skulk in the shadows and attack the legitimacy of voices with whom they disagree” (Reheis-Boyd 2014).

Forged Letters from the Coal Industry to Members of Congress

While the surreptitious funding of astroturf groups to disseminate a corporate message is certainly a deceptive practice, on at least one key occasion, some fossil fuel companies have gone much further, backing an effort in which forged letters from actual nonprofit groups were sent to members of Congress in an effort to influence a vote on key federal climate change legislation.

The Coal Industry Posing as Nonprofits

In 2009, Congress was debating the American Clean Energy and Security Act of 2009 (often known as the Waxman-Markey climate bill), which proposed to institute a federal carbon emissions reduction plan. Two weeks prior to the vote, Rep. Tom Perriello (VA) received a letter opposing the legislation from Creciendo Juntos, a nonprofit Latino organization based in his Charlottesville district.

“My organization, Creciendo Juntos, represents minorities in your district,” the letter began. “We ask you to use your important position to help protect minorities and other consumers in your district from higher electricity bills. Please don’t vote to force cost increases on us, especially in this volatile economy.”

Only after the vote on the bill did Rep. Perriello learn—from Creciendo Juntos—that the letter was a fraud.

As it turns out, the letter on Creciendo Juntos stationery was not the only forgery, and Rep. Perriello was not the only member of Congress to receive forged letters opposing the bill. Forged letters were sent purportedly on behalf of organizations including the National Association of the Advancement of Colored People (NAACP) (Figure 6), the American

The group used letterheads from respected constituent groups representing minorities, seniors, and women.

Association of University Women, the American Legion, and the Jefferson Area Board on Aging. Fraudulent letters were also sent to Representatives Kathy Dahlkemper (PA) and Chris Carney (PA) (Perriello 2009).

Public exposure of the fraud resulted in a congressional investigation and hearing before the House Select Committee on Energy Independence and Global Warming. The congressional investigation revealed that the fraud was perpetrated by Bonner and Associates, a lobbying firm subcontracted by a front group called the American Coalition for Clean Coal Electricity (ACCCE), composed of and funded primarily by coal industry representatives (Center for Media and Democracy 2014a). The ACCCE, which remains in operation today, counts among its corporate members Arch Coal, Murray Energy, and Peabody Energy.

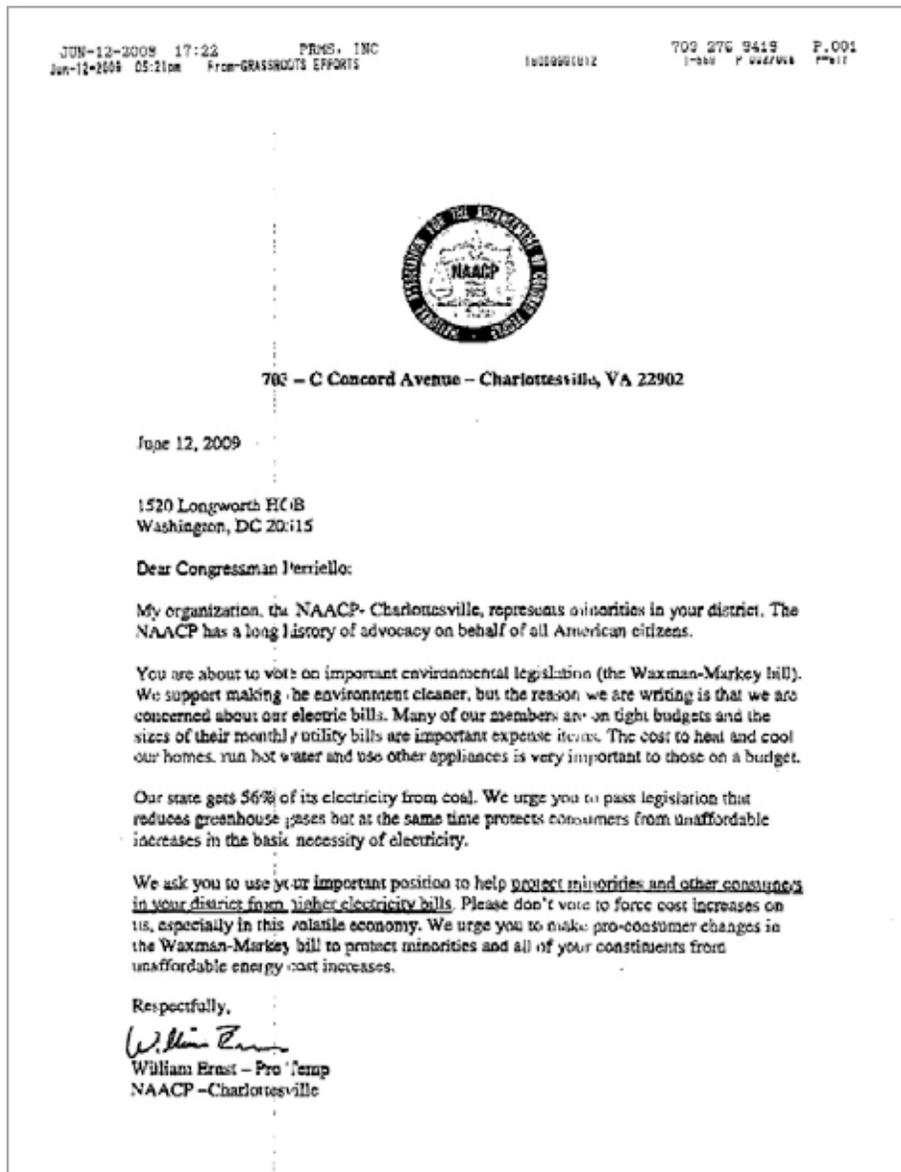
Testimony Opposing Climate Action in Congressional Hearings

In all, some 13 fraudulent letters were uncovered in the congressional investigation. The group had appropriated

letterheads from respected constituent groups representing minorities, seniors, and women. It then wrote lobbying letters that ran directly counter to the stances held by those nonprofit groups. The letters were targeted to three House members whose position in favor of the Waxman-Markey bill was seen as vulnerable.

Testimony given during the congressional investigation reveal that Bonner and Associates was officially hired on June 10, 2009, by the Hawthorn Group, a public relations and communications firm employed by the ACCCE. The contract was verbal, according to material Bonner provided to Congress; nothing was committed to paper. But the choice of

FIGURE 6. Coal Industry Campaign Included Forged Letters to Congress



“The NAACP is appalled that an organization like Bonner and Associates would stoop to these depths to deceive Congress. In this case Bonner and Associates are exploiting the African-American Community to achieve their misdirected goal. These tactics illustrate that discriminatory tactics normally used to deceive voters are now being used to deceive the Congress.”

—Hilary O. Shelton,
director of the NAACP’s
Washington bureau and
senior vice president
for advocacy

In 2009, before a vote in Congress on a key climate bill, a front group for the fossil fuel industry, the American Coalition for Clean Coal Electricity, hired a public relations firm that sent members of Congress forged letters purporting to be from 13 nonprofit groups including the NAACP, misrepresenting their positions on the proposed legislation. Hilary O. Shelton, director of the NAACP’s Washington bureau and Senior Vice President for Advocacy, sharply condemned the firm, Bonner and Associates, for the incident.

Bonner and Associates was likely no accident. The firm had a well-known reputation for astroturfing on behalf of the sugar, tobacco, and pharmaceutical industries (Zapanta 2009). Documents released during the congressional investigation also show that the ACCCE paid Hawthorn nearly \$3 million in 2009 for “outreach” to community groups, with a specific focus on minorities, seniors, and veterans.

Edward Markey, then chair of the Select Committee on Energy Independence and Global Warming, called the forged letters a symptom of the millions of dollars of “shadow lobbying” undertaken by the coal coalition to block clean energy policy. He stated that “these subterranean lobbying campaigns, where millions of dollars are spent in the cynical attempt to buy the support ideas don’t earn, have become a substitute for an honest exchange of views and distort the playing field away from other Americans longing to have their voices heard” (Markey 2009).

Not surprisingly, the nonprofit groups involved were outraged. Hilary O. Shelton, director of the NAACP’s Washington Bureau and senior vice president for advocacy, said of the incident: “The NAACP is appalled that an organization like Bonner and Associates would stoop to these depths to deceive Congress. In this case Bonner and Associates are

exploiting the African-American community to achieve their misdirected goal” (Shelton 2009)

Lisa Maatz, director of public policy and government relations at the American Association of University Women, called the forgery a “very personal deceit.” Bonner and Associates had resurrected a defunct Charlottesville branch of her organization, used its logo and the home address of the group’s former president, and used the name of a staff member who had died before the congressional debate over regulating carbon emissions had ever arisen.

Jack Bonner, founder and president of Bonner and Associates, testified on behalf of his firm, claiming that the letters were the work of a single, rogue temporary employee. Further, Bonner claimed to have fired the employee responsible and revealed the fraud to the ACCCE before the vote on the Waxman-Markey bill. However, the members of Congress who received fraudulent letters were not informed of the forgery until weeks after the vote (Kaplun 2009; Perriello 2009).

At the hearing, Steve Miller, president of the ACCCE, admitted that he and Bonner knew about the forgeries at least two days before the House voted on the climate bill but did not notify the targeted lawmakers until after the votes were recorded (Miller 2009).

Coal’s “Information Council on the Environment” Sham

Long before the formation of the ACCCE, U.S. coal companies and their allies formed a short-lived but potent front group in 1991 called the Information Council on the Environment (ICE) with the express purpose of deceiving the public about climate science. Like the oil and gas industry, the coal industry put forth scientist spokespeople and ran ad campaigns through ICE. And like those of the oil and gas industry, the coal industry’s tactics stayed under the radar until they were exposed by leaked documents.

Internal documents leaked to the public in 1991 (Figure 7, p. 20 and Appendix E, p. 41), reveal ICE’s strategy: a plan to “reposition global warming as theory (not fact)” and to “use a spokesman from the scientific community,” recognizing that “technical sources receive the highest overall credibility ratings” (ICE 1991c).

Misleading Advertising

ICE’s \$500,000 advertising campaign was designed to disparage climate science and cherry-pick the data to highlight claims of cooling temperatures in order to confuse the public. Print and radio ads presented climate science as alarmist and out of touch with reality.

One print advertisement prepared for the ICE campaign showed a sailing ship about to drop off the edge of a flat world

ICE was aware of record warmth and above-average temperatures.

into the jaws of a waiting dragon. The headline read: “Some say the earth is warming. Some also said the earth was flat.” Another featured a cowering chicken under the headline “Who told you the Earth was warming...Chicken Little?”

An ad aired in 1991 on the Rush Limbaugh show is emblematic of the tone and content of ICE’s messaging:

Stop panicking! I’m here to tell you that the facts simply don’t jibe with the theory that catastrophic global warming is taking place. Try this fact on for size. Minneapolis has actually gotten colder. So has Albany, New York. (Simmons Advertising, Inc. 1991)

ICE’s own internal documents show that as the organization was running its ad campaign the group was aware of science showing a “long-term warming trend,” including record warmth and above-average temperatures. For example, one state climatologist is cited as saying about the climatic record: “It certainly did not show cooling”—precisely the opposite of the information the group was disseminating to the public through its advertising (ICE 1991a).

The leaked ICE documents also show that the group planned to particularly target younger, lower-income women with its deceptive messages, noting that:

These women are more receptive than other audience segments to factual information concerning the evidence for global warming. They are likely to be “green” consumers, to believe the earth is warming, and to think the problem is serious. However, they are also likely to soften their support for federal legislation after hearing new information on global warming. (ICE 1991b)

FIGURE 7. Internal Coal Memo Reveals Strategies to Undermine Climate Science

Strategies

1. Reposition global warming as theory (not fact).
2. Target print and radio media for maximum effectiveness.
3. Achieve broad participation across the entire electric utility industry.

to see its personal stake in the issue & they are to become actively engaged and committed.

More specifically, the results of this study point toward two possible target audiences. One possible target audience includes those who are most receptive to messages describing the motivations and vested interests of people currently making pronouncements on global warming—for example, the statement that some members of the media scare the public about global warming to increase their audience and their influence. People who respond most favorably to such statements are older, less-educated males from larger households, who are not typically active information-seekers, and are not likely to be “green” consumers. Members of this group are skeptical about global warming, predisposed to favor the ICE agenda, and likely to be even more supportive of that agenda following exposure to new information. They are not, however, accustomed to taking political action. They are good targets for radio advertisements.

Another possible target segment is younger, lower-income women. These women are more receptive than other audience segments to factual information concerning the evidence for global warming. They are likely to be “green” consumers, to believe the earth is warming, and to think the problem is serious. However, they are also likely to soften their support for federal legislation after hearing new information on global warming. These women are good targets for

A leaked internal 1991 strategy memo from the Information Council on the Environment, a front group for coal interests, explicitly calls for misrepresenting climate science as “theory,” not fact, and discusses plans to target specific demographic groups, including lower-income women, with a deceitful message about climate uncertainty.

ICE’s \$500,000 advertising campaign was designed to disparage climate science and cherry-pick the data.

Fossil Fuel Interests Fueling the Deception

ICE was formed by and closely linked to fossil fuel companies and trade associations, including the Edison Electric Institute, the Western Fuels Association, and the National Coal Association. One of the vice presidents of the board of directors of the ICE campaign was Fred Palmer, then chief executive officer (CEO) of Western Fuels and now senior vice president at Peabody Energy (Peabody Energy 2010). Peter Lilly, then president and chief operating officer of Peabody Holding Company, served on the National Coal Association's board of directors at the time. Several major fossil fuel companies or their subsidiaries pledged support for ICE, including:

- Peabody Holding Company (Peabody Energy)
- Ohio Valley Coal Company, a subsidiary of Murray Energy (Ohio Valley Coal Company n.d.)
- Pittsburgh and Midway Coal Mining, a subsidiary of Chevron at the time (BLM 2014)
- Island Creek Coal Company, a subsidiary of Occidental Petroleum (Oreskes 2011, EIA 1993)

Breaking the ICE

A bald attempt to mislead the public about climate science, ICE was a short-lived effort and was terminated in 1991—the same year it began—after it was exposed in the press. In its television and radio broadcasts, as well as newspaper opinion articles and interviews, ICE had promoted its “science advisory panel,” including well-known climate contrarians Robert Balling, Patrick Michaels, and Sherwood Idso. But even these three scientists admitted to the *New York Times* that “the salient element in two of [ICE's] ads—that some areas might be cooling—did not contradict the theory of global warming” (Wald 1991). Once the documents showing ICE's misleading intent leaked to the public, Balling and Michaels quickly sought to distance themselves from the ICE campaign. Michaels complained that “with only three names on the mailing, people would identify him as the source of the information, while he was not, in fact, the author, and that the size of the [science advisory] panel was so small that it made the position appear scientifically unpopular” (Wald 1991).

Even years later, some in the coal industry expressed disappointment that ICE could not have continued its work after its deceptive aims were uncovered. In a 1999 letter, Peabody Energy's Fred Palmer wrote, “it is unfortunate that ICE did not go forward” since the campaign did provoke a “dramatic turnaround in how people viewed the issue of global warming” (Readfearn 2013; Oreskes 2011).

Deception by the American Legislative Exchange Council

The American Legislative Exchange Council (ALEC), a group that purports to stand for free-market principles, provides a venue for industry groups to influence policy makers behind closed doors. Leaked internal documents show that ALEC, backed by many industry groups including many major fossil fuel companies such as Chevron, ExxonMobil, Peabody Energy, and Shell, continues to serve as an important conduit for climate misinformation and policy proposals designed to block climate action today. (Figure 8 and Appendix F, p. 42).

Like other industry groups, ALEC provides a means for major fossil fuel companies to pay lip service to the realities of climate science in their public-facing materials while their behind-the-scenes memberships and sponsorships support misinformation and block climate action. Much of ALEC's lobbying has focused on dismantling, at the state level, policies that have proven effective in reducing carbon pollution and accelerating the transition to clean energy. ALEC has honed several tools in the fossil fuel industry's lobbying and public relations toolbox: closed-door access to public policy makers—including more than 2,000 state legislators and a network that includes many members of Congress—and the development of industry-friendly sample legislation intended to be used as templates in state legislatures across the country.

Sponsoring Misinformation

ALEC's current official position obscures climate change by calling it a “historical phenomenon,” ignoring the primary driver of climate change today—the burning of fossil fuels—and asserts that “the debate will continue on the significance of natural and anthropogenic contributions” (ALEC 2015a).

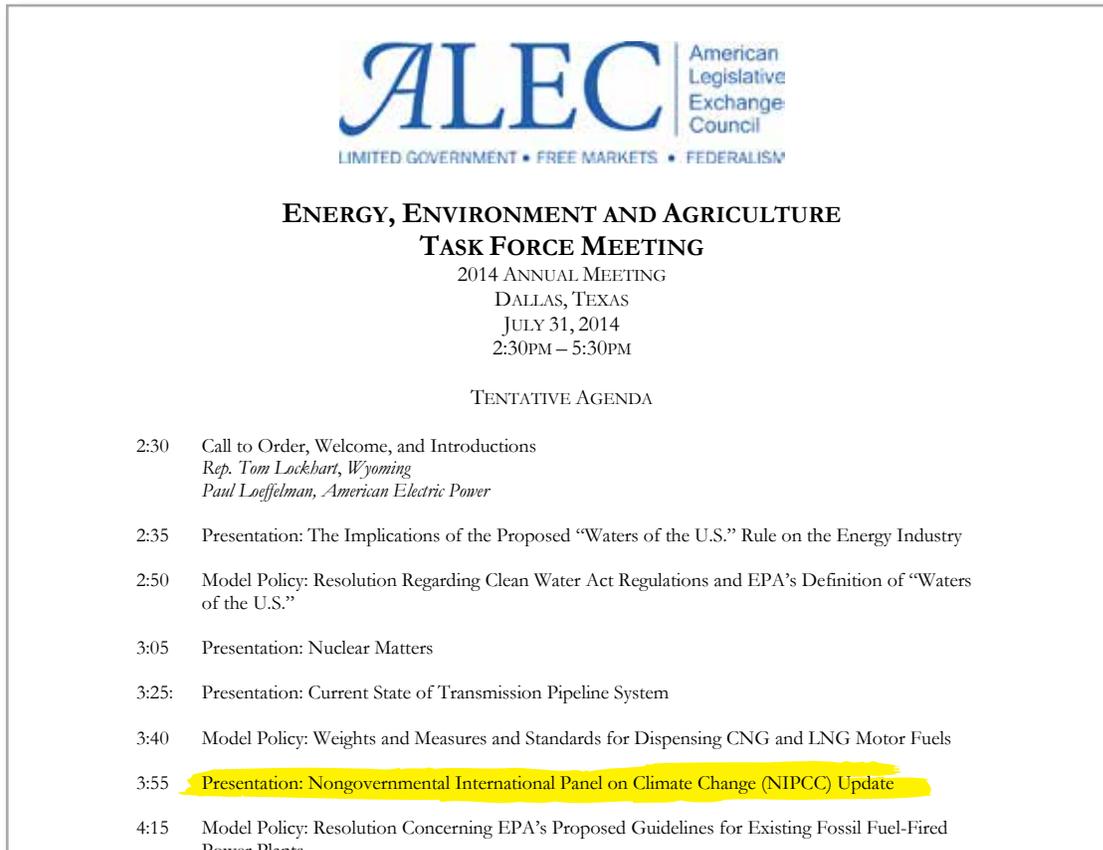
While downplaying the impacts of climate change, ALEC has been working to block climate action at the federal and state level since the 1990s and was named in the API roadmap memo (Dossier #2, p. 9) as a participating organization or “fund allocator” (Walker 1998).

Leaked internal documents reveal the extent of ALEC's misinformation. For example, ALEC's 2014 annual meeting in Dallas featured a presentation by Joseph Bast, president of the Heartland Institute, a group with a long history of misrepresenting science that is probably best known for posting a billboard likening people who accept climate science to the “Unabomber” Ted Kaczynski. The billboard featured a mug shot of a disheveled Kaczynski with the text: “I still believe in Global Warming. Do you?”

In his talk, Bast falsely claimed that “there is no scientific consensus on the human role in climate change” (Heartland Institute 2014). Equally notable, Bast disparaged the work of the IPCC—among the world's largest and most respected scientific bodies with experts from more than 130 countries. One of Bast's misleading presentation slides flatly stated: “The Intergovernmental Panel on Climate Change (IPCC), a project of the United Nations, *is not a credible source of science or economics*” (Heartland Institute 2014; emphasis in the original). Immediately following Bast's session, ALEC held a meeting for legislators and fossil fuel industry lobbyists to hammer out the wording of a sample state resolution against the EPA's pending carbon emissions standard for power plants (ALEC 2014).

At the same meeting, ALEC featured a talk by David Rothbard, a contributor to API's Global Climate Science Communications Team in 1998 (Dossier #2, p. 9) and then president of the Committee for a Constructive Tomorrow.

FIGURE 8. ALEC Hosts Climate Denier Joseph Bast at 2014 Annual Meeting



A leaked agenda and slides from a 2014 ALEC meeting document a presentation from Joseph Bast, the president of the libertarian Heartland Institute, who told legislators that the Intergovernmental Panel on Climate Change is “not a credible source of science or economics.” Bast’s organization compiles non-scientific alternative “reports” designed to mimic the IPCC’s and regularly attacks mainstream scientists and scientific organizations.

Rothbard’s presentation, “Climate Science Talking Points 2014,” began with the outright falsehood that “the scientific reality is that on virtually every claim—from A to Z—the claims of the promoters of manmade climate fears are falling short or going in the opposite direction” (CFACT 2014). Sponsors of the 2014 ALEC annual meeting included the ACCCE, Chevron, ExxonMobil, and Peabody Energy (Surgey 2014a).

Working to Stymie Climate Action

Internal documents also show that ALEC’s Energy, Environment, and Agriculture Task Force sits at the center of the organization’s efforts to attack climate science and clean energy

policy. The task force convenes frequent closed-door meetings in which state legislators are briefed with climate misinformation and lobbied by utility and fossil fuel interests. Meeting minutes from the task force were leaked to and released by Common Cause starting in 2011, and these revealed that the task force’s members at that time included BP, Chevron, ExxonMobil, Peabody Energy, and Shell (Myslinski 2011). ExxonMobil is listed as a current member of ALEC’s Private Enterprise Advisory Council, and Peabody Energy and Shell have served in this capacity in the past (ALEC 2015b; ALEC, 1992; Center for Media and Democracy 2014b).

Today, ALEC’s Energy, Environment, and Agriculture Task Force continues to distribute sample legislation to state legislators that they can easily introduce to oppose EPA carbon emissions standards and attempt to roll back

successful renewable energy standards and multi-state climate initiatives, such as the Regional Greenhouse Gas Initiative in the northeastern United States (see, for example, Surgey 2014b; ALEC 2011; ALEC 2010). In a leaked resolution adopted in 2007, ALEC urged the EPA not to regulate global warming emissions from cars and trucks, claiming that there was a “lack of evidence that human-caused emissions of greenhouse gases will ‘endanger public health or welfare’” (ALEC 2007).

Between 2013 and 2015, some 65 ALEC-sponsored bills introduced in state legislatures were designed to roll back or repeal state standards requiring utilities to increase their use of renewable energy (Center for the New Energy Economy 2015). While most of these bills have so far failed to pass, other sample bills drafted by ALEC are still being debated and would impede government oversight of hydraulic fracturing (fracking), undermine regional cap-and-trade climate pacts, and introduce science misinformation in school curricula (Negin 2012). For example, in 2011 ALEC publicly took credit for 13 states adopting resolutions “in opposition to the EPA’s plans to regulate greenhouse gas emissions” (ALEC 2011). ALEC’s Environmental Literacy Improvement Act has provided a template for attempts to legislate content contrary to accepted climate science into school curricula (Horn 2013; Horn 2012).

A Wave of Defections from ALEC

In September 2014, Google made a very public defection from ALEC. Speaking on National Public Radio’s Diane Rehm Show, Google’s Executive Chairman Eric Schmidt said that his company had decided that funding ALEC was a mistake. Google “has a very strong view that we should make decisions in politics based on facts,” Schmidt said. “And the facts of climate change are not in question anymore. Everyone understands climate change is occurring. And the people who oppose it are really hurting our children and our grandchildren and making the world a much worse place. And so we should not be aligned with such people. They’re just literally lying” (Negin 2014; Rehm 2014).

ALEC also lost a few energy sector members over the last two years, notably ConocoPhillips, Occidental Petroleum, and, most recently, BP (Center for Media and Democracy 2015b). But roughly 30 fossil fuel companies and trade associations remain supporters, including Chevron, ExxonMobil, Koch Industries, Peabody Energy, and Shell. Two of these companies—ExxonMobil and Koch Industries—have even supported ALEC above and beyond the group’s annual membership fees. ExxonMobil donated at least \$1.6 million to ALEC over the last decade, while Koch Industries gave \$747,000 between 2007 and 2012 (Brulle 2014; Center for Media and Democracy 2015a; Negin 2014).

As ALEC continues to actively work to sponsor misinformation about climate science and to block climate action, most of the major fossil fuel companies supporting ALEC (with the exception of Koch Industries and Peabody Energy) publicly acknowledge the threat posed by climate change and claim on their respective websites to be doing something about it.

Chevron says, for example, that “taking prudent, practical, and cost-effective action to address climate change risks is the right thing to do” (Chevron 2014). And ExxonMobil, whose representative sits on ALEC’s corporate board, asserts that it “engage[s] with policymakers directly and through trade associations around the world to encourage sound policy solutions for addressing the risks of climate change” (ExxonMobil 2015).

Shell’s website features a lengthy question and answer exchange with the company’s chief climate change adviser, David Hone, who explains the basics of climate science and then concedes: “Business can’t solve the climate problem on its own. I think it’s the role of companies like Shell—which has been a strong advocate of the core solutions since the late 1990s—to help identify possible solutions for policymakers” (Fineren 2014). In September 2014, Shell CEO Ben van Beurden reiterated his company’s position in an interview with the *Washington Post*. Even as his company continues to sponsor ALEC’s activities, van Beurden contended: “Let me be very, very clear. For us, climate change is real and it’s a threat that we want to act on. We’re not aligning with skeptics” (Mufson 2014).

ALEC has provided a template for attempts to legislate content contrary to accepted climate science into school curricula.

The Global Climate Coalition’s 1995 Primer on Climate Change Science

The preceding deception dossiers present internal documents offering strong evidence that major fossil fuel companies worked for decades, often through front groups, to deceive the American public by suppressing and distorting the realities and risks of climate change. As noted earlier, climate science findings were strong enough and public attention great enough that there is little chance that the major fossil fuel companies were unaware of the realities from as early as 1988. The internal document in this dossier presents the strongest evidence yet that major fossil fuel companies knew the reality of human-caused climate change and its implications even as they continued their deceptive practices. This internal memo, “Predicting Future Climate Change: A Primer,” was written in 1995 by a fossil fuel company scientist for the benefit of a fossil fuel industry coalition. (Figure 9, p. 26 and Appendix G, p. 44)

The primer, which came to light in 2009, was leaked to the *New York Times* after surfacing in a lawsuit filed by the auto industry against the state of California’s efforts to limit vehicles’ carbon emissions. It was written by a team led by Leonard S. Bernstein, a chemical engineer and climate expert at Mobil Corporation, on behalf of an industry group called the Global Climate Coalition (GCC). The GCC presented itself as an umbrella trade association coordinating business participation in the international debate on global climate change policy, but, as we now know, its real purpose was to oppose mandatory reductions in carbon emissions (Najor 2002). Its members included BP, Chevron, Exxon, Mobil, Shell, and others. Bernstein served as chair of the GCC’s science and technology advisory committee in the 1990s (Bernstein 1995).

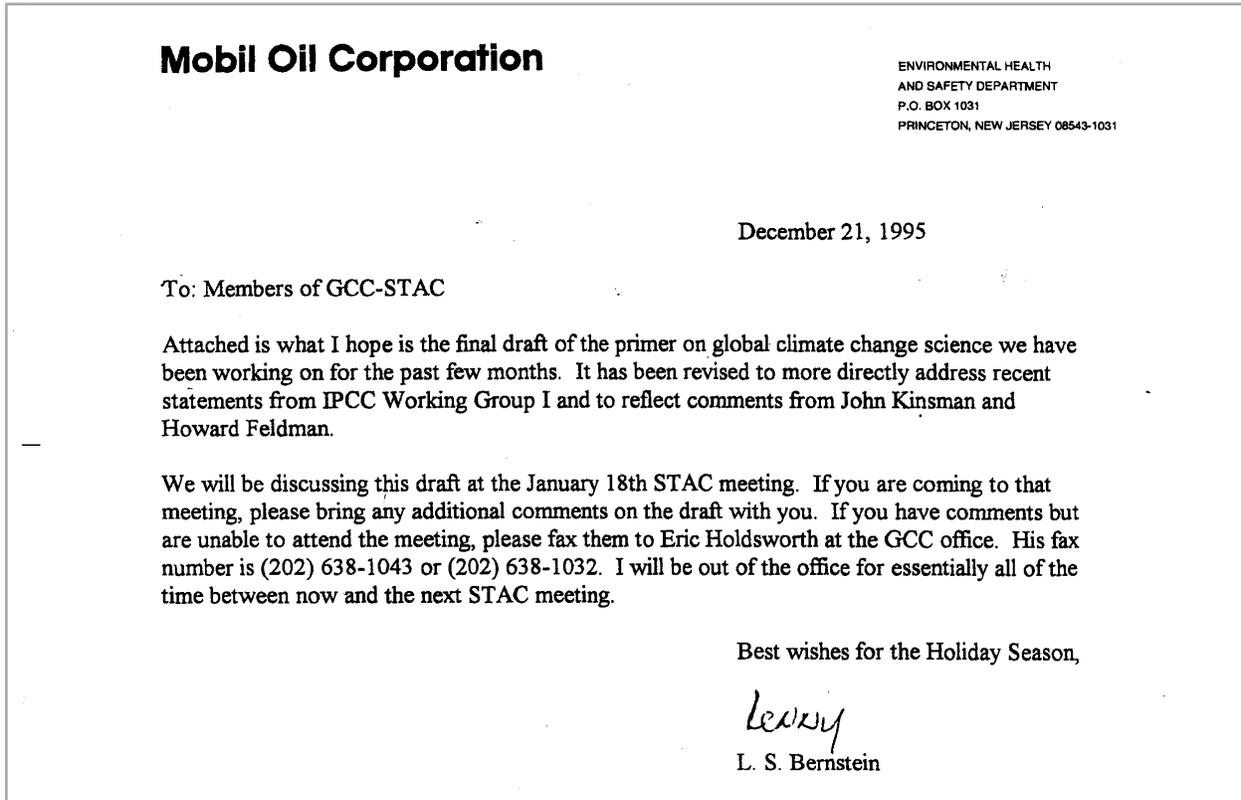
Denying the Undeniable

The leaked GCC “primer on climate change science” demonstrates that the fossil fuel industry was well aware of the scientific understanding of climate change even as it continued to sow doubt about the science and block climate action. The 17-page primer assessed what was known about climate science and unequivocally stated that “the scientific basis for the Greenhouse Effect and the potential impact of human emissions of greenhouse gases such as CO₂ on climate *is well established and cannot be denied*” (Bernstein 1995; emphasis added).

One section of the leaked primer—which was reportedly excised before it was approved for circulation to GCC members at large but was written by Bernstein’s team of fossil fuel scientists and seen by the GCC Technology Advisory Committee—even examined and debunked existing “contrarian” climate science theories. It discussed why a number of contrarian theories failed to “offer convincing arguments against the conventional model of greenhouse gas emission-induced climate change,” including those highlighting the role of water vapor, anomalies in the temperature record, and the contribution of solar variability (Revkin 2009; Bernstein 1995).

For example, the excised section dismisses the claims of “contrarian” research featuring the role of solar radiation as an explanation for global warming by saying that “direct measures of the intensity of solar radiation over the past 15 years indicate a maximum variability of less than 0.1%, sufficient to account for no more than 0.1°C temperature change,” which

FIGURE 9. Fossil Fuel Companies' Own Scientists Warned About the Reality of Climate Science



temperature will lead to an array of climate changes (rainfall patterns, storm frequency and intensity, etc.) that could have severe environmental and economic impacts.

This primer addresses the following questions concerning climate change:

1) Can human activities affect climate?

The scientific basis for the Greenhouse Effect and the potential impact of human emissions of greenhouse gases such as CO₂ on climate is well established and cannot be denied.

2) Can future climate be accurately predicted?

- changes in land-use, such as removing forests, can change the amount of energy absorbed by the Earth's surface, the rate of water evaporation, and other parameters involved in the climate system, which could result in either warming or cooling.

These three factors create the potential for a human impact on climate. The potential for a human impact on climate is based on well-established scientific fact, and should not be denied. While, in theory, human activities have the potential to result in net cooling, a concern about 25 years ago, the current balance between greenhouse gas emissions and the emissions of particulates and particulate-formers is such that essentially all of today's concern is about net warming. However, as will be discussed below, it is still not possible to accurately predict the magnitude (if any)

In 1995, the Global Climate Coalition, an umbrella organization whose members included many of the largest fossil fuel companies, commissioned an internal assessment about climate science from a team led by an industry scientist at Mobil. The formerly secret industry memo asserts that human-caused global warming "cannot be denied."

the primer identifies as “one-fifth of the temperature change observed during that [120-year] period.” The primer notes that such a finding “does not allay concerns about future warming which could result from greenhouse gas emissions. Whatever contribution solar variability makes to climate change should be additive to the effect of greenhouse gas emissions” (Bernstein 1995).

The clear refutation of the solar variability argument in the memo is especially noteworthy given the continued funding by ExxonMobil and other fossil fuel interests of Dr. Willie Soon for more than two decades, considering that Soon’s work has long spuriously emphasized the role of solar variability (Schmidt 2005).

Bowing Out

As the GCC’s dismissal of the reality of human-caused climate change became less tenable, some companies responded by withdrawing from the coalition. BP left in 1997 and Shell followed in 1998. Upon withdrawing, BP stated that “the time to consider the policy dimensions of climate change is not when the link between greenhouse gases and climate change is conclusively proven, but when the possibility cannot be discounted and is taken seriously by the society of which we are part. We in BP have reached that point” (Center for Media and Democracy 2012).

With key members bowing out, the GCC announced in 2000 that it would undergo a “strategic restructuring” much as the tobacco industry, under growing pressure, gave up its lobbying arm (the Tobacco Institute) and its wing devoted to promoting misleading science about the links between tobacco and disease (the Council for Tobacco Research) as part of the 1998 master settlement agreement with U.S. states. When the GCC disbanded in 2002, after President Bush had rejected the Kyoto Protocol and withdrawn U.S. support, the organization stated that it “had served its purpose by contributing to a new national approach to global warming” and that it had “achieved what [it] wanted to accomplish with the Kyoto Protocol” (Center for Media and Democracy 2012; Najor 2002).

Sowing Doubt

Through their membership in the GCC, the major fossil fuel companies would have received “Predicting Future Climate Change: A Primer” in 1995, a document acknowledging that climate change and the human role in it were undeniable. And yet, for more than a decade to follow, many of these companies continued to make statements and produce advertisements that claimed that climate science was uncertain or inconclusive.

Despite the fact that the fossil fuel industry’s own scientists were advising them of the reality of human-caused climate change, until the group was disbanded in 2002 the GCC and its industry members continued to implement a media strategy to invoke “uncertainty” in order to undermine the public’s trust in climate scientists and oppose policies designed to reduce emissions from fossil fuels. Tactics included a video news release claiming that increased levels of carbon dioxide would help alleviate world hunger by boosting crop production and ads warning that a proposed tax on carbon would increase the price of gas by fifty cents or more per gallon, when no such proposed tax was on the table (Brown 2000).

Exxon received the primer but continued to participate in the deception campaign mapped out by API’s Global Climate Science Communications Team in 1998. In 2000, ExxonMobil even published an ad in the *New York Times* and the *Wall Street Journal* titled “Unsettled Science.” The ad referenced a scientific paper, published in *Science*, claiming that the paper disputed that global warming was happening. However, after the ad appeared, the author of the referenced scientific paper, Dr. Lloyd Keigwin, wrote to ExxonMobil charging that the company had inappropriately and selectively used his data and exploited his research for political purposes (Herrick 2001).

The 1995 “Predicting Future Climate Change: A Primer” is remarkable for indisputably showing that, while some fossil fuel companies’ deception about climate science has continued to the present day, at least two decades ago the companies’ own scientific experts were internally alerting them about the realities and implications of climate change. The fact that these companies were fully aware of the realities of climate change *is well established and cannot be denied*.

***The fossil fuel industry’s own scientists
were advising them of the reality of human-
caused climate change.***

Holding the Fossil Fuel Industry Accountable

Despite climate impacts faced by communities in the United States and elsewhere, today, more than two decades since the fossil fuel industry and policy makers learned that the climate is changing and that emissions from burning fossil fuels are the cause, there is still no comprehensive U.S. federal policy to address the problem. Meanwhile, some fossil fuel companies continue deceptive practices, both directly and through trade associations and front groups like API, ACCCE, and ALEC, in an effort to block climate and energy policies such as the EPA's Clean Power Plan and the Renewable Fuel Standard.

At the federal level, the campaigns described in this report have sought to block legislative action that would have addressed the worst consequences of climate change. At the state level, the deceptive tactics of companies like BP, Chevron, ExxonMobil, Peabody Energy, and Shell—individually and collectively through groups like ALEC and WSPA—have sought to weaken, delay, and defeat climate-related policies. These rear-guard efforts have exacerbated the problem of climate change and likely slowed much-needed climate action.

These efforts to obstruct action on climate change continue today. The giant coal company Peabody Energy is at the forefront of attacks on the EPA's Clean Power Plan, for example, which seeks to limit carbon pollution from its largest source—electricity-generating power plants (see, for example, Goldman 2015). The Clean Power Plan is also being opposed by oil and gas industry trade groups representing BP, Chevron, ExxonMobil, and Shell—trade groups that include API, the American Fuel and Petrochemical Manufacturers, and the Independent Petroleum Association of America (IPAA). The IPAA believes that the Clean Power Plan sets a

“dangerous precedent” for EPA regulation of the oil and gas industries' global warming pollution, a sentiment echoed by Shell (Fang 2014; IPAA 2014).

As the picture of the fossil fuel companies' efforts to deceive the public comes into clear view, the time is ripe to hold these companies accountable for their actions and responsible for the harm they have caused.

Some fossil energy companies have advertised a commitment to renewable energy while at the same time encouraging the expanded use of their fossil fuel products, which they know to be responsible for disruptive climate change. Moreover, some companies are also exploring or exploiting increasingly carbon-intense fuel sources, from tar-sands to the exploration of warming Arctic regions for oil drilling. Given the conflict between the fossil fuel industry's interests and the public interest, additional measures are necessary to ensure transparency and to prevent ongoing deception that could negatively influence public policy on climate change.

How should the American public expect fossil fuel companies to behave?

Recommendations

To be sure, responsibility for climate change is spread across society. Governments, carbon-emitting industries (for example, electric utilities), and individuals all bear some responsibility. But given that the world's largest fossil fuel companies have actively worked to deceive the public and block climate action while knowing that their products have caused significant damage to people and the planet, they must be held responsible for their actions (Frumhoff et al., under review).

At a minimum, society should expect them to:

Stop disseminating misinformation about climate change. The science is clear. Burning fossil fuels is a primary driver of climate change, and the impacts are already being felt today—from rising seas to longer and more frequent droughts to extreme heat. It is not acceptable for fossil fuel companies to deny the science, nor is it acceptable for them to publicly accept the science while funding climate contrarian scientists or front groups that distort or deny the science. Fossil fuel companies must distance themselves—publicly—from deceptive activities. To make clear that they are making such commitments, companies should publicly disclose all funding they provide to researchers, political organizations, and cultural institutions.

Taking action to stop deceiving the public about the risks of fossil fuels is, however, necessary but not sufficient. Fossil fuel companies should take further action to align their practices with the magnitude of the harm we face, driven by the continued use of their products. In addition to ceasing the spread of misinformation, fossil fuel companies should also:

- **Support fair and cost-effective policies to reduce global-warming emissions.** The fossil fuel industry has generally opposed a wide array of policies, including carbon pricing, cap-and-trade, renewable energy standards, renewable fuel standards, direct emission regulation, and others. It is time for the industry to identify and publicly support policies that will lead to the reduction of emissions at a scale needed to lessen the worst effects of global warming.
- **Reduce emissions from current operations and update their business models to prepare for future global limits on emissions.** Fossil fuel companies should take immediate action to cut emissions from their current operations, for example, by ending the wasteful practice of flaring natural gas. They should update their business models to reflect an understanding of the risks of unabated burning of fossil fuels, as well as the importance, and the necessity, of national and international policies limiting carbon emissions. As a key component of this, fossil fuel companies should map out the pathway

they plan to take in the next 20 years to ensure we achieve a low-carbon energy future.

- **Pay for their share of the costs of climate damages and preparedness.** Communities around the world are already facing and paying for damages from rising seas, extreme heat, more frequent droughts, and other climate-related impacts. Additional investments must be made to protect and prepare communities for these risks today and in the future, and fossil fuel companies should pay a fair share of the costs.
- **Fully disclose the financial and physical risks of climate change to their business operations.** By law, public U.S.-based fossil fuel companies are required to discuss risks that might materially affect their business in their annual Securities and Exchange Commission (SEC) filings. However, compliance with this guidance is not consistent. Fossil fuel companies should fully assess climate change risks and disclose any material risks to the SEC and their shareholders (adapted from Frumhoff et al., under review).

Virtually all companies operate under a “social license”—an agreement wherein the public trusts the company to protect workers and consumers from the adverse effects of the company’s products and actions. But companies can lose that license. Over the past several decades, the public has made it clear on issues such as tobacco, asbestos, and lead that companies can lose their social license when they fail to acknowledge and address the known negative impacts of their products on human health and well-being.

Climate change is no different. The conduct we describe in this report justifies revoking the social license of those companies. Fossil fuel companies must accept responsibility for their heat-trapping emissions, halt their use of deceptive tactics to block policies designed to speed the transition to a low-carbon energy system, and pay their fair share of the costs of harm.

A global call to action—including efforts such as shareholder engagement, divestment campaigns, consumer pressure, and litigation—may be needed to bring about this transformation. We trust and expect that the information laid out in this report can be helpful in moving this transformation forward.

It is not acceptable for fossil fuel companies to publicly accept the science while funding climate contrarian scientists.

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Dr. Wei-Hock Soon's Smithsonian Contracts

Included here are a few pages from a cache of many documents obtained through Freedom of Information Act (FOIA) requests by Greenpeace and the Climate Investigations Center regarding funding by fossil fuel interests of contrarian climate research at the Harvard-Smithsonian Astrophysics Center. The pages below are from an agreement between the Smithsonian Astrophysical Observatory and Southern Company, a large utility, that includes a provision allowing

Southern Company “an advance written copy of proposed publications...for comment and input, if any;” and an agreement that the Smithsonian “shall not publish and utilize the name or otherwise identify SCS [Southern Company Services] in any publications or other advertisements.” The complete dossier of documents pertaining to Dr. Soon's funding is available online at www.ucsusa.org/decadesofdeception.

**AGREEMENT
FOR FUNDING A GRANT TO
SMITHSONIAN ASTROPHYSICAL OBSERVATORY**

THIS AGREEMENT is entered into by and between the **Smithsonian Astrophysical Observatory**, located at 60 Garden Street, Cambridge, MA 02138-1516, hereinafter referred to as “Smithsonian”), and **Southern Company Services, Inc.**, having its principal place of business at 600 North 18th Street, Birmingham, Alabama 35203, on behalf of itself, its parent and its affiliate companies, (collectively referred to as “SCS”).

WITNESSETH

WHEREAS, the Smithsonian is interested in conducting an intensive science review of solar variability and climate change, as provided in the attached Proposal P6882-1-08 (referred to as the “Project”); and,

WHEREAS, SCS, on behalf of itself, its parent and its affiliate companies is interested in furthering the research on the Project and in obtaining advance information and is therefore willing to make a grant to fund this research.

NOW, THEREFORE, Smithsonian and SCS hereby agree as follows:

15. **Publicity.** Smithsonian shall not publish and utilize the name or otherwise identify SCS or its affiliate companies in any publications or other advertisements without the express written consent of SCS. As further consideration to SCS, Smithsonian shall provide SCS an advance written copy of proposed publications regarding the deliverables for comment and input, if any, from SCS.
16. **Duplicate Originals.** Duplicate originals of this Agreement shall be executed, each of which shall be deemed an original but both of which together shall constitute one and the same instrument.
17. **Entire Agreement.** This Agreement contains the entire agreement of the parties and there are no oral or written representations, understandings or agreements between the parties respecting the subject matter of this Agreement which are not fully expressed herein.

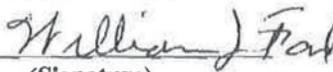
IN WITNESS WHEREOF, each of the parties hereto acknowledge that they have caused this Agreement to be executed in duplicate originals by its duly authorized representative on the respective dates entered below.

SOUTHERN COMPANY SERVICES, INC.

THE SMITHSONIAN INSTITUTION
 ASTRPPHYSICAL
 OBSERVATORY
 ("Smithsonian")

By: ^("SCS")

 (Signature)

By: 
 (Signature)

Name: Bryan Baldwin
 (Typed or printed)

Name: William J. Ford
 (Typed or printed)

Title: Manager, Environmental Assessment

Title: Contract and Grant Specialist

Date: 2/28/08

Date: 2/21/08

American Petroleum Institute's "Roadmap" Memo

Below is one page of a nine-page strategy memo written in 1998 by a team convened by the American Petroleum Institute (API), the country's largest oil trade association whose member companies include BP, Chevron, ConocoPhillips, ExxonMobil, and Shell Oil among others. The memo, leaked that same year to the *New York Times*, outlines a multifaceted deception strategy for the fossil fuel industry, including a plan

akin to that used by the tobacco industry to "identify, recruit, and train" a team of five seemingly independent scientists to confuse the public by accentuating "uncertainties" in climate science where few if any existed. The complete API "roadmap" memo is available online at www.ucsusa.org/decadesofdeception.

Global Climate Science Communications

Action Plan

Project Goal

A majority of the American public, including industry leadership, recognizes that significant uncertainties exist in climate science, and therefore raises questions among those (e.g. Congress) who chart the future U.S. course on global climate change.

Progress will be measured toward the goal. A measurement of the public's perspective on climate science will be taken before the plan is launched, and the same measurement will be taken at one or more as-yet-to-be-determined intervals as the plan is implemented.

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.

Current Reality

Unless "climate change" becomes a non-issue, meaning that the Kyoto proposal is defeated and there are no further initiatives to thwart the threat of climate change, there may be no moment when we can declare victory for our efforts. It will be necessary to establish measurements for the science effort to track progress toward achieving the goal and strategic success.

Western States Petroleum Association's Deception Campaign

The slide below is excerpted from a 32-slide presentation given by Catherine Reheis-Boyd, president of the Western States Petroleum Association (WSPA), to the Washington Research Council on November 11, 2014. The presentation was leaked to Northwest Public Radio, Bloomberg, and other media sources, and the authenticity of the slides was confirmed by a WSPA spokesperson. This slide identifies groups that Reheis-Boyd claims were “activated” by the

association to work against climate policy. In fact, the groups—some of which WSPA created themselves—were all part of a deception campaign created to disseminate WSPA's message via groups designed to sound like grassroots public interest organizations. More documents related to WSPA's deception campaign are available online at www.ucsusa.org/decadesofdeception.

In 2014, WSPA has activated a significant number of campaigns and coalitions that have contributed to WSPA's advocacy goals and continue to respond to aggressive anti-oil initiatives in the West.

Each campaign was structured to address specific state or local issues and provide an excellent opportunity for the petroleum industry to educate consumers and voters in all of WSPA's five Western states.

WSPA has also invested in several coalitions that are best suited to drive consumer and grassroots messages to regulators and policymakers.

WSPA

- California Drivers Alliance
- California Citizens For Energy Independence
- California Against Higher Taxes
- Fed Up At The Pump
- Washington Consumers For Sound Fuel Policy
- Save Our Jobs
- AB 32 Implementation Group
- Local Hydraulic Fracturing Campaigns
- Concerned Mineral Owners Of California
- Tank The Tax
- Dragoians For Sound Fuel Policy
- Kern Citizens For Energy
- Fueling California
- California Citizens For Affordable & Reliable Energy
- California Fuel Facts

Invest Engage Guide

Upstream

Downstream

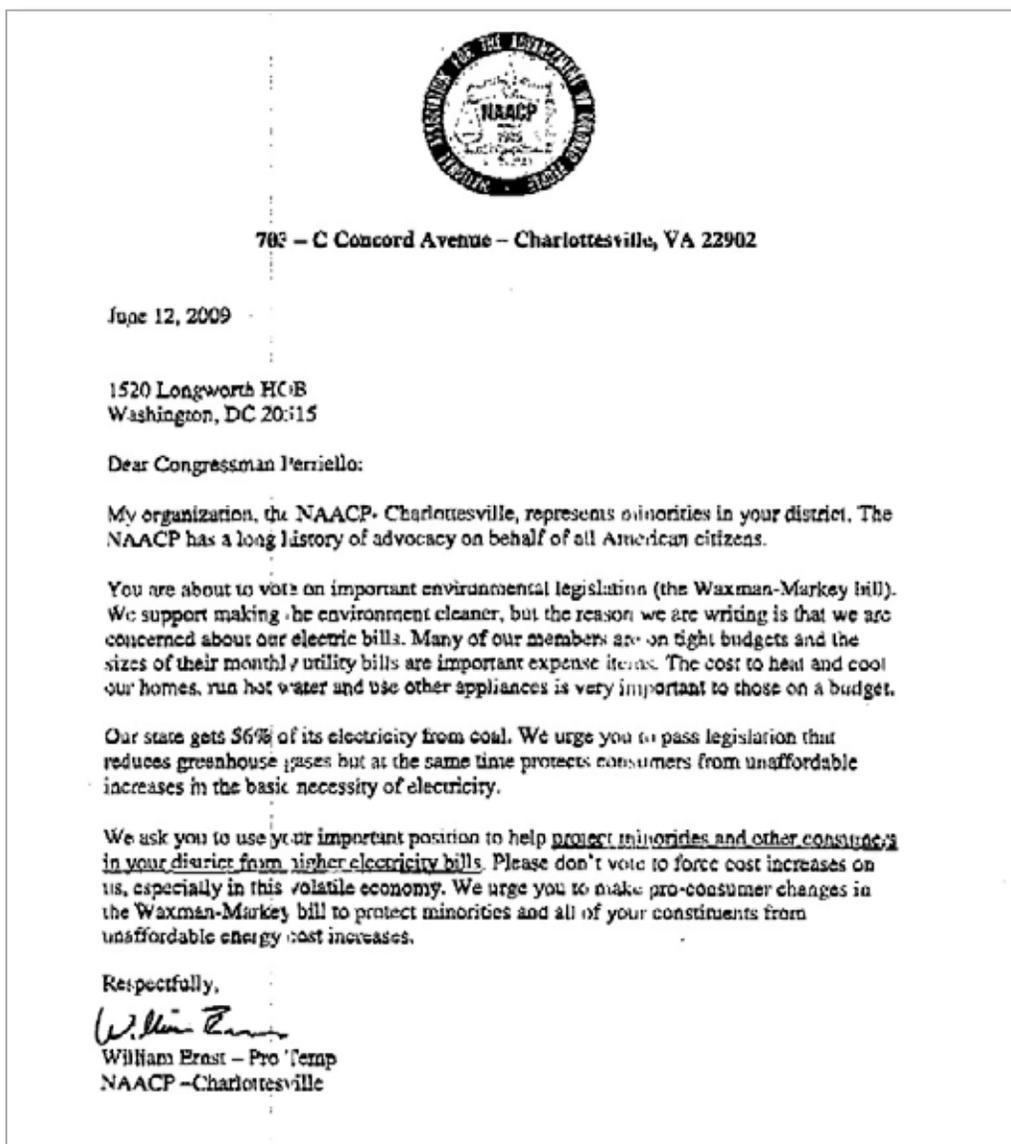
ENERGY PROUD

9

Forged Letters from the Coal Industry to Members of Congress

The letter below is an example of one of 13 forged letters to members of Congress written by Bonner and Associates on behalf of the American Coalition for Clean Coal Electricity (ACCCE). This letter expropriates the letterhead of the National Association for the Advancement of Colored People (NAACP) and includes a forged signature. Other letters used similar techniques from other nonprofit organizations.

The forged letters, intended to influence a key vote on climate legislation in the U.S. Congress, only came to light after the vote when some of the affected parties were notified by Bonner and Associates. The discovery of the fraud resulted in a congressional hearing. More documents pertaining to this incident are available online at www.ucsusa.org/decadesofdeception.



Coal’s “Information Council on the Environment” Sham

Included here are excerpted pages of leaked documents from a front group for the fossil fuel industry, the Information Council on the Environment (ICE). The document below, a seminal strategy document from when the group’s fossil fuel backers were still considering calling it “Informed Citizens for the Environment” (hence the alternate title), sets out

the group’s goal to “reposition” established climate science “as theory (not fact).” The documents were leaked in 1991 to the Sierra Club by an unnamed individual who disagreed with the campaign’s goals or approach. The complete dossier of other internal ICE documents is available online at www.ucsusa.org/decadesofdeception.

INFORMED CITIZENS FOR THE ENVIRONMENT

Mission

The mission of the Informed Citizens for the Environment is to develop an effective national communications program to help ensure that action by the Administration and/or Congress on the issue of global warming is based on scientific evidence.

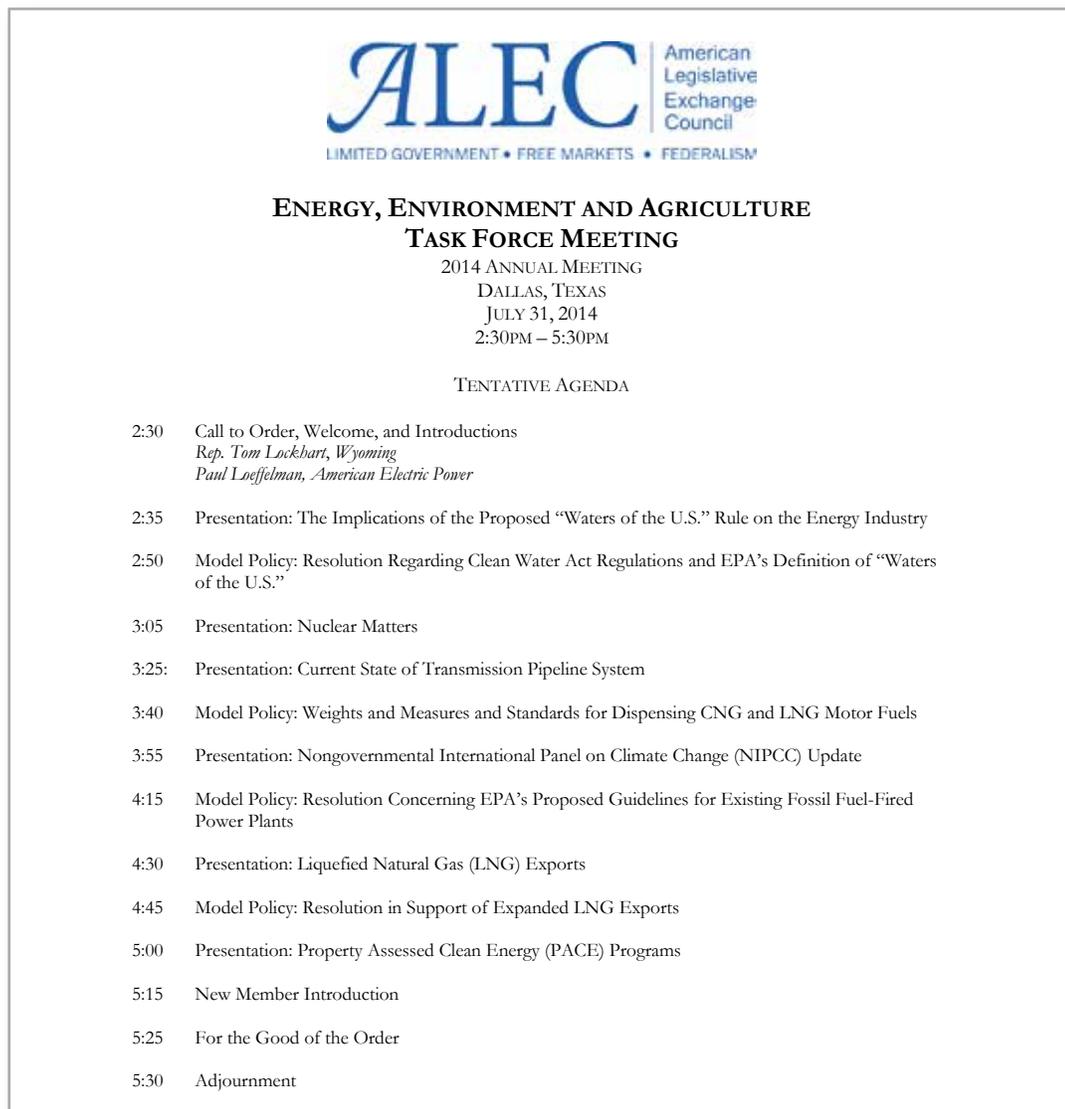
Strategies

1. Reposition global warming as theory (not fact).
2. Target print and radio media for maximum effectiveness.
3. Achieve broad participation across the entire electric utility industry.
4. Start small, start well, and build on early successes.
5. Get the test concepts developed and implemented as soon as possible.
6. “Test market” execution in early 1991.
7. Build national involvement as soon as “test market” results are in hand — summer 1991.
8. Go national in the late fall of 1991 with a media program.
9. Use a spokesman from the scientific community.

Deception by the American Legislative Exchange Council

Included here are internal documents from the 2014 annual conference of the American Legislative Exchange Council (ALEC), a special interest group that provides a venue for industry groups to influence policy makers behind closed doors. Included is a page from the agenda listing presentations from long-discredited climate contrarians and a page of slides from a presentation by Joseph Bast, president of the Heartland Institute, a think tank that has long been a

discredited source of climate change misinformation. The presentation slide, for example, expresses the opinion that the highly respected worldwide scientific body the International Panel on Climate Change “is not a credible source of science or economics.” More documents pertaining to ALEC’s role in the fossil fuel industry’s climate deception campaign are available online at www.ucsusa.org/decadesofdeception.



**Nongovernmental
International Panel on
Climate Change
Update**



The debate over global warming is **the most consequential public policy debate** taking place today in the United States and around the world. The stakes are enormous.



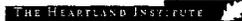
The Intergovernmental Panel on Climate Change (IPCC), a project of the United Nations, is **not a credible source of science or economics.**



IPCC Bias #1:

Climate change is "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods."

The Framework Convention on Climate Change, 1994, Article 1.2



IPCC Bias #2:

"We are an intergovernmental body and we do what the governments of the world want us to do. ... If the governments decide we should do things differently and come up with a vastly different set of products, we would be at their beck and call."

Rajendra Pachauri, in *The Guardian*, September 20, 2013



NIPCC

Nongovernmental International Panel on Climate Change

- * Formed in 2003 by Prof. S. Fred Singer
- * Partnership of three organizations:
 - * The Center for the Study of Carbon Dioxide and Global Change
 - * Science and Environmental Policy Project
 - * The Heartland Institute



The Global Climate Coalition's 1995 Primer on Climate Change Science

Shown here are two pages pertaining to a 1995 primer on climate science quietly commissioned by an industry group called the Global Climate Coalition from a team led by Leonard S. Bernstein, then a scientist at Mobil Oil. The primer, entitled "Predicting Future Climate Change," was distributed internally to many of the world's largest fossil fuel companies. It states unequivocally that "The scientific basis for the Greenhouse Effect and the potential impact of human

emissions of greenhouse gases such as CO₂ on climate is well established and cannot be denied." The internal primer came to light in 2009 when it was published in the *New York Times* after surfacing in a lawsuit filed by the auto industry against the state of California. The complete 17-page memo, including appendices specifically dismissing contrarian arguments still promoted by many of the same companies today, is available online at www.ucsusa.org/decadesofdeception.

Mobil Oil Corporation

ENVIRONMENTAL HEALTH
AND SAFETY DEPARTMENT
P.O. BOX 1031
PRINCETON, NEW JERSEY 08543-1031

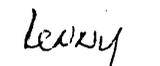
December 21, 1995

To: Members of GCC-STAC

Attached is what I hope is the final draft of the primer on global climate change science we have been working on for the past few months. It has been revised to more directly address recent statements from IPCC Working Group I and to reflect comments from John Kinsman and Howard Feldman.

We will be discussing this draft at the January 18th STAC meeting. If you are coming to that meeting, please bring any additional comments on the draft with you. If you have comments but are unable to attend the meeting, please fax them to Eric Holdsworth at the GCC office. His fax number is (202) 638-1043 or (202) 638-1032. I will be out of the office for essentially all of the time between now and the next STAC meeting.

Best wishes for the Holiday Season,


L. S. Bernstein

APPROVAL DRAFT

Predicting Future Climate Change: A Primer

In its recently approved Summary for Policymakers for its contribution to the IPCC's Second Assessment Report, Working Group I stated:

...the balance of evidence suggests that there is a discernable human influence on global climate.

The Global Climate Coalition's Science and Technical Advisory Committee believes that the IPCC statement goes beyond what can be justified by current scientific knowledge.

This paper presents an assessment of those issues in the science of climate change which relate to the ability to predict whether human emissions of greenhouse gases have had an effect on current climate or will have a significant impact on future climate. It is a primer on these issues, not an exhaustive analysis. Complex issues have been simplified, hopefully without any loss of accuracy. Also, since it is a primer, it uses the terminology which has become popular in the climate change debate, even in those cases where the popular terminology is not technically accurate.

Introduction and Summary

Since the beginning of the industrial revolution, human activities have increased the atmospheric concentration of CO₂ by more than 25%. Atmospheric concentrations of other greenhouse gases have also risen. Over the past 120 years, global average temperature has risen by 0.3 - 0.6°C. Since the Greenhouse Effect can be used to relate atmospheric concentration of greenhouse gases to global average temperature, claims have been made that at least part of the temperature rise experienced to date is due to human activities, and that the projected future increases in atmospheric concentrations of greenhouse gases (as the result of human activities) will lead to even larger increases in future temperature. Additionally, it is claimed that these increases in temperature will lead to an array of climate changes (rainfall patterns, storm frequency and intensity, etc.) that could have severe environmental and economic impacts.

This primer addresses the following questions concerning climate change:

- 1) Can human activities affect climate?

The scientific basis for the Greenhouse Effect and the potential impact of human emissions of greenhouse gases such as CO₂ on climate is well established and cannot be denied.

- 2) Can future climate be accurately predicted?

The climate models which are being used to predict the increases in temperature which might occur with increased atmospheric concentrations of greenhouse gases are limited at present both by incomplete scientific understanding of the factors which affect climate and

AIAM-050775

The Climate Deception Dossiers

*Internal Fossil Fuel Industry Memos Reveal
Decades of Corporate Disinformation*

Fossil fuel companies have intentionally spread disinformation about climate science for decades. The companies' own internal memos tell the story, including documents brought to light as recently as 2015.

Internal documents from the major fossil fuel companies—including BP, Chevron, ConocoPhillips, ExxonMobil, Peabody Energy, and Shell—reveal an irrefutable story: for nearly three decades, as the scientific evidence concerning climate change became overwhelmingly clear, these companies and their allies developed or participated in campaigns to deliberately sow confusion and block action to address global warming.

This report presents the most complete and up-to-date collection yet available of this deception campaign through seven dossiers—collections containing some 85 internal company and trade association documents that have either been leaked to the public, come to light through lawsuits, or been disclosed through Freedom of Information Act (FOIA) requests. The evidence demonstrates that the world's largest fossil fuel companies knew the reality about the harm their products were causing since 1988; their own

scientists warned 20 years ago in an internal memo that human-caused global warming “cannot be denied.” And yet the deception campaign continued, with documents revealing secret funding of purportedly independent scientists, internal strategy memos outlining intentional misinformation campaigns, and even evidence of the use of forged letters to members of Congress.

During this same time period since 1988—after major fossil fuel companies indisputably knew about the harm their products were causing to people and the planet—more than half of all industrial carbon emissions have been released into the atmosphere.

Taken together, these documents build a compelling case for why these companies must be held accountable for their deception and their share of responsibility for global warming damages already underway. UCS is making the complete collection of 85 internal memos—totaling more than 330 pages—available online.

**Union of
Concerned Scientists**

FIND THIS DOCUMENT ONLINE: www.ucsusa.org/decadesofdeception

The Union of Concerned Scientists puts rigorous, independent science to work to solve our planet's most pressing problems. Joining with citizens across the country, we combine technical analysis and effective advocacy to create innovative, practical solutions for a healthy, safe, and sustainable future.

NATIONAL HEADQUARTERS

Two Brattle Square
Cambridge, MA 02138-3780
Phone: (617) 547-5552
Fax: (617) 864-9405

WASHINGTON, DC, OFFICE

1825 K St. NW, Suite 800
Washington, DC 20006-1232
Phone: (202) 223-6133
Fax: (202) 223-6162

WEST COAST OFFICE

500 12th St., Suite 340
Oakland, CA 94607-4087
Phone: (510) 843-1872
Fax: (510) 843-3785

MIDWEST OFFICE

One N. LaSalle St., Suite 1904
Chicago, IL 60602-4064
Phone: (312) 578-1750
Fax: (312) 578-1751