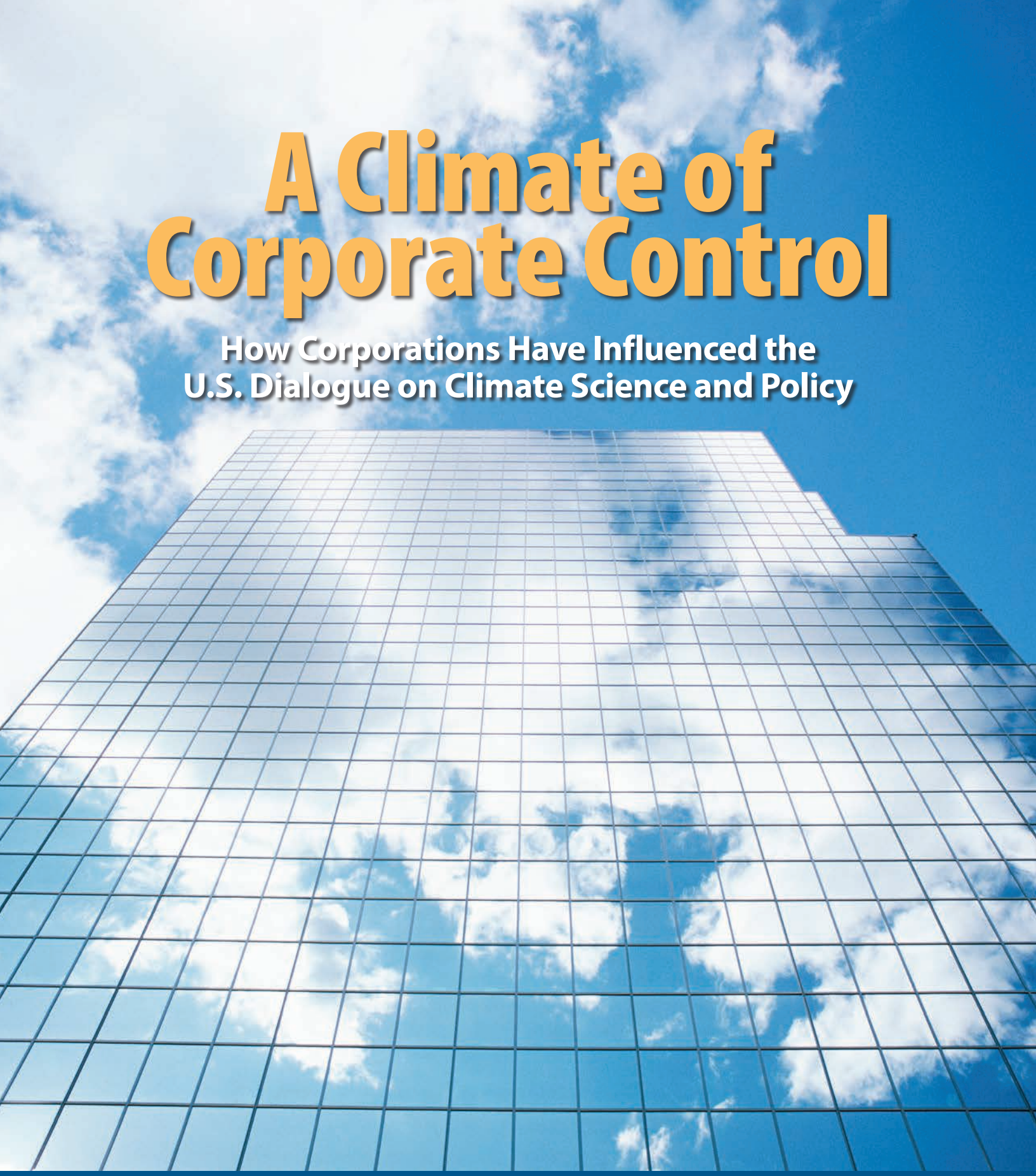
A Climate of Corporate Control

How Corporations Have Influenced the U.S. Dialogue on Climate Science and Policy



Union of Concerned Scientists
Citizens and Scientists for Environmental Solutions

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The Scientific Integrity Program of the
Union of Concerned Scientists

MAY 2012

Union of Concerned Scientists
Citizens and Scientists for Environmental Solutions

The Union of Concerned Scientists (UCS) is the leading science-based nonprofit working for a healthy environment and a safer world.

The UCS Scientific Integrity Program mobilizes scientists and citizens alike to defend science from political interference and restore scientific integrity in federal policy making. To learn more, visit *www.ucsusa.org/scientific_integrity*.

This report is available on the UCS website at *www.ucsusa.org/corporateclimate*.

Union of Concerned Scientists

Citizens and Scientists for Environmental Solutions

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

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

DESIGN: David Gerratt/NonprofitDesign.com
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Contributors

Francesca Grifo is the senior scientist and director of the UCS Scientific Integrity Program. She holds a Ph.D. in botany from Cornell University.

Gretchen Goldman is an analyst with the UCS Scientific Integrity Program. She holds a Ph.D. in environmental engineering from the Georgia Institute of Technology.

Ben Gutman is a former analyst in the UCS Scientific Integrity Program. He holds a Ph.D. in biology from the University of California–Berkeley.

Jennifer Freeman is a science writer and consultant to the UCS Scientific Integrity Program. She holds an M.B.A. from Columbia University.

Paul Rogerson is a research intern with the UCS Scientific Integrity Program. He holds an M.Sc. in cognitive neuroscience from University College London.

Drew Veysey is a former research intern with the UCS Scientific Integrity Program. He holds a B.A. in environmental studies and political science from American University.

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CHAPTER 1

Introduction

In recent years, corporations and their agents have played an increasing role in the national conversation on climate change, with companies weighing in not only on policy debates but also participating in discussions of climate science. To better understand this growing corporate influence, we analyzed the actions of many of the most highly engaged companies.

"The slight percentage of carbonic acid in the atmosphere may, by the advances of industry, be changed to a noticeable degree in a few centuries."

— Svante Arrhenius, 1906

Our analysis reveals that while some American companies have taken consistent and laudable actions in support of climate science—and of consequent policy—others have worked aggressively to undermine the science and block science-based policy proposals. Still other companies have taken contradictory actions in different venues. Such inconsistent corporations create confusion by representing the scientific consensus accurately in some venues but not in others, and by supporting politicians, trade groups, and think tanks whose positions are in direct conflict with one another. The resulting defeat or delay of policy efforts to address climate change has huge implications for government, the economy, public well-being, and the planet.

Data collected by scientists in the field play a critical role in informing policies that affect public health and the environment. Since the 1950s, the National Oceanic and Atmospheric Administration's Mauna Loa Observatory in Hawaii has been continuously collecting atmospheric data that help scientists understand how our climate is changing.

Greater transparency in corporate activities can further illuminate the corporate influence, both positive and negative, that this report has been able to document. We thus recommend specific actions that policy makers, investors, consumers, and the media can take in order to guide the nation down a path of greater corporate accountability.

Overwhelmingly, the world's climate scientists today believe that climate change is occurring and that human activities are the primary cause.

The Study of Climate

From the early work of Joseph Fourier in proposing that the atmosphere traps heat from the earth's surface to the research of John Tyndall in identifying the gases responsible for this, scientists have studied the greenhouse effect and its impact since the nineteenth century (Fourier 1824; Tyndall 1861). The first calculations predicting the impact that the burning of fossil fuels would have on global temperatures were performed in 1896 by Svante Arrhenius (Arrhenius 1896). Using basic mathematical calculations, he estimated that a doubling of carbon dioxide in the atmosphere would raise temperatures by 5 to 6°C, a prediction remarkably similar to the likely range of 2 to 4.5°C estimated by climate scientists today using far more sophisticated methods (IPCC 2007).

By the middle of the twentieth century, scientific evidence demonstrated that levels of carbon dioxide, the most abundant heat-trapping gas in the atmosphere, were steadily rising (Keeling 1960). The "Keeling Curve" showed that carbon dioxide concentrations in the atmosphere not only were increasing but also that they were doing so at a much faster rate than Arrhenius had originally predicted. With the science itself rapidly advancing, the United Nations Environment Programme and World Meteorological Organization in 1988 established the Intergovernmental Panel on Climate Change (IPCC)—a scientific body comprising thousands of scientists from 195 member countries around the globe, charged with synthesizing the current scientific understanding of climate change and the role played by human activities (IPCC 2012).

In the years since its formation, the conclusions of the IPCC have grown increasingly confident.

Photo courtesy of the National Institutes of Health

The tobacco industry's fight to block the regulation of cigarettes is one of the most infamous examples of corporate interference in science. On April 14, 1994, executives from the leading tobacco companies testified before Congress that nicotine was not addictive. Evidence would later reveal the industry's suppression of scientific findings, dating back to 1963, that smoking harms public health.

In its most recent assessment, the panel declared "unequivocal" the proposition that Earth's climate is warming and "very likely" that emissions of heat-trapping gases from human activities have caused "most of the observed increase in globally averaged temperatures since the mid-20th century" (IPCC 2007). More recently, the National Academy of Sciences concluded, "it is now beyond a reasonable doubt that humans are responsible for most of [the observed] warming, and highly likely we are responsible for all of it" (NRC 2010). Overwhelmingly, the world's climate scientists today believe that climate change is occurring and that human activities are the primary cause.

Corporate Interference in Federal Regulation

Corporations in the United States have always taken part in national discussions on laws and regulations that might affect their industry. In a democracy, this is their right. However, when new scientific data reveal a threat to public health, safety, or the environment, factions of the affected industries often oppose calls for regulation by attacking the science on which discussions are being based.

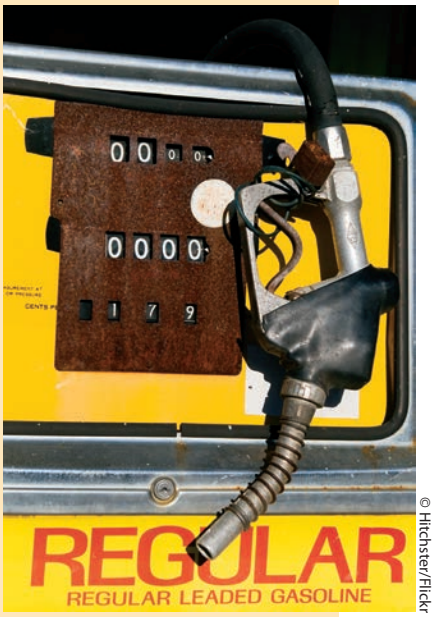
To accomplish this, corporate interests question the scientific consensus around an issue, and counter established findings by promoting their own studies—conducted with flawed methodologies—that lead to a predetermined outcome. They pay seemingly independent scientists to further undermine the original findings (UCS 2012; Michaels 2008; UCS 2008). Moreover, industry players have been known to intimidate or openly attack scientific researchers, to skew analyses of the costs and benefits of proposed regulations, or to undermine the regulatory process itself (Mann 2012; McGarity and Wagner 2008).

This multipronged strategy was first widely exposed in the now infamous case of the tobacco industry's attempts to delay regulation of cigarettes by spreading doubt about the link between smoking and lung cancer. But these tactics have

Corporate Interference in the Regulation of Leaded Gasoline

Tetraethyl lead was introduced as an additive to gasoline in the 1920s to improve automobiles' combustion efficiency. Although production workers were known to have experienced severe lead poisoning even in the early years of manufacture, the prevailing consensus was that lead toxicity was a health concern only at those high levels of exposure (Bridbord and Hanson 2009). Until the 1960s, most research published on lead was conducted by the Kettering Laboratory, a research institution affiliated with the leaded-gasoline industry (Needleman 2000). But when independent research found evidence that linked lead contamination in the oceans to leaded gasoline, and that background levels of lead in the environment were not "naturally occurring," as Kettering and the American Petroleum Institute had contended, companies tried to cast doubt on the researcher (Denworth 2008).

At Senate hearings as late as 1966, an industry witness testified: "There is no evidence that [leaded gasoline] has introduced a danger in the field of public health." It took another decade of legal battles—during which a pediatrician who pursued groundbreaking research into the connection between childhood lead exposure and lower IQ was harassed and accused of misconduct (McGarity and Wagner 2008)—before the EPA was able to mandate reduction of gasoline's lead content. Since this enactment in 1976, an 80 percent drop in average blood lead levels has been attributed to the phaseout of leaded gasoline (Pirkle, Brody, and Matte 1994).



The EPA banned leaded gasoline in 1976 after decades of legal battles with industry. The ban has since resulted in several public health improvements, including an 80 percent drop in average blood lead levels.

also been observed time and time again in debates over other science-based efforts to protect the American public (Michaels 2008).

For example, despite substantial scientific evidence that sulfur emissions from coal-fired power plants were harming lakes and forests in the eastern United States as a result of acid rain (NRC 1981), utility companies, the Reagan administration, and later the business press emphasized uncertainties in the science and played up the potential costs of reducing emissions (Brown 1986). These efforts delayed serious action toward solving the problem until the passage of the Clean Air Act Amendments of 1990 (Christopher, Lehmann, and Gay 2011).

Industry players have been known to intimidate or openly attack scientific researchers, to skew analyses of the costs and benefits of proposed regulations, or to undermine the regulatory process itself.

In the case of asbestos exposure, companies fought for decades to deny growing scientific evidence of the health risks, such as asbestosis and asbestos-related cancers (Michaels 2008). As late as 1991, the asbestos industry successfully challenged a rule that would have resulted in a partial ban on new asbestos products, convincing a judge that the U.S. Environmental Protection Agency (EPA) had "presented insufficient evidence" of the dangers of asbestos (EPA 2010).

Similarly, when scientific evidence mounted that linked DDT and similar pesticides to the devastation of bird and other wildlife populations, as widely publicized by biologist Rachel Carson in her book *Silent Spring*, chemical companies—including Monsanto, Velsicol Chemical, and American Cyanamid—attacked Carson as a "hysterical woman" unqualified to write a book about pesticides (Matthiessen 1999).

American Petroleum Institute Advertisement Opposing Climate Legislation

Courtesy of Politico

In the fourth quarter of 2009, when climate change legislation was under active discussion in Congress, nine advertisements with messages opposing this legislation appeared in the *Washington Post* and 12 appeared on *Politico*, a political journalism website (Political Correction 2009). All but one of these ads were sponsored by the American Petroleum Institute as part of two public relations campaigns, "EnergyCitizen.org" and "People of America's Natural Gas and Oil Industry," to oppose climate legislation (Kaplun 2009).

The influence of corporations has become more visible and pervasive in recent years (UCS 2012). Industry interference has been observed in a variety of venues where science is used to inform federal policy, ranging from interference in the Food and Drug Administration's approval of medical devices (UCS 2009) to the blocking of a national ground-level ozone standard proposed by the EPA (Broder 2011).

After attacking the science, many companies warn, seemingly in the same breath, that regulation of their products or by-products will severely damage their businesses. Yet political recognition of

a health or environmental problem and its subsequent responsible regulation has consistently proven to mitigate the danger at hand without devastating economic impact to industry (Burnett and Hansen 2010; Meyer 1995).

Corporate Engagement on Climate Change

A similar pattern of industry attacks on science and science-based regulations has occurred with climate change. Because numerous and wide-ranging economic sectors have stakes in the outcome of climate policy debates, diverse industrial actors have engaged in attacks on climate science (Levy and Egan 2003). These powerful corporations have been tremendously influential in dictating how the public understands climate science and how the national discussion on climate policy has progressed—or *not* progressed.

They have been able to exert this influence through several time-tested tactics, including: exaggerating the uncertainty associated with climate change while ignoring what is known, funding contrarian scientists and think tanks engaged in spreading misinformation and blocking policy, and contributing to politicians who proclaim they do not believe in the science of global warming. This highly orchestrated climate change denial machine has been well documented (Dunlap and McCright 2011; Oreskes and Conway 2010; Begley 2007).

Yet there is another side to the story. Despite the increased hostility toward climate science and policy by some corporate players, other companies are choosing a different path. Beginning in the early 2000s, when international climate negotiations had significant support and climate legislation seemed more likely to pass, several large American companies spoke out in favor of climate science and science-based policy (Layzer 2007; Kolk and Levy 2001). These companies called for comprehensive legislation to address climate change, launched initiatives to lower their carbon footprints, and publicly dissociated themselves from groups that undermine climate science. A poll conducted in 2000 indicated that 75 percent of Fortune 5000 executives believed global warming to be a serious problem (Carpenter 2001).

Although these bold expressions of support for climate action date from more than a decade ago, and although much stronger scientific evidence now reinforces the need for such support, much of the corporate concern about climate change is being drowned out by a resurgence of attacks on climate science (Mann 2012). Still, a small contingent of companies remains vocally supportive of science-based climate policy.

Corporate Support for Climate Legislation

A QUESTION OF AMERICAN LEADERSHIP

How will America take back control of its energy future while enhancing our national security?
When will the U.S. economy regain its competitive edge instead of letting other countries corner the emerging global clean energy market?
How can we get the U.S. back on track by creating American jobs in the new low-carbon economy?
How can we protect our natural resources and future generations from climate change?
These are the questions we're asking our policy makers as America faces a once-in-a-century opportunity to lower greenhouse gas emissions and become the world's leader in a burgeoning clean energy economy.
We are a broad and diverse group of leading businesses, environmental organizations, national security experts, veterans' organizations, labor unions and faith-based groups.
We believe it's time for Democrats and Republicans to unite behind bi-partisan, national energy and climate legislation that increases our security and limits emissions, as it preserves and creates jobs.
It's a question of American leadership.

A message from the above organizations.

A sign-on letter in late 2009 called for national energy and climate legislation. It was run in the *New York Times*, *Washington Post*, and on *Politico* (Juliani 2010). Seven of the signatory companies are examined in this report.

Courtesy of the Center for Climate and Energy Solutions

Further complicating corporate engagement in climate change are two phenomena—heightened consumer demand for environmentally friendly products and services and consumers' increasing calls for corporate social responsibility—that together have led many companies to rethink their business strategies (Vogel 2005). While in some cases this has helped create a context in which companies can advocate for climate action, it has also opened a door to "greenwashing"—in which companies use public relations campaigns to make unsubstantiated claims regarding their environmental stewardship (Dahl 2010).

Climate change has fallen victim to many such corporate communications, making it more difficult for policy makers and the public to determine who is actually committed to climate action (earnestly "walking the walk") and who has simply learned to speak the language (just "talking the talk"). The latter strategy allows companies to maintain a public image of climate consciousness while, behind the scenes, undermining climate science and policy in powerful ways.

© UCS/Chris Carney

California's Proposition 23 was a ballot measure that would have prevented implementation of a pollution control law that required companies to report their global warming emissions and begin to reduce them. By donating to campaigns either for or against the proposition, several companies in our sample attempted to influence the vote.

A Systematic Approach

In order to make sense of the many, sometimes contradictory, actions taken by companies, we explored the roles that major corporate actors have played during a key time period prior to and during the discussion of several important climate change policy proposals in 2009 and 2010. To obtain a manageable study scope, we scrutinized a sample of 28 publicly held companies in the S&P 500, selected because they chose to engage in climate policy in at least one of two ways:

- They commented publicly on the "EPA Endangerment Finding"—that is, the Environmental Protection Agency's *Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act* (EPA 2009)
  OR
- They contributed to either the pro- or anti-Proposition 23 campaigns during the 2010 California election. "Prop 23," if approved, would have suspended "implementation of air pollution control law (AB 32) requiring major sources of emissions to report and reduce greenhouse emissions that cause global warming, until unemployment drops to 5.5 percent or less for [a] full year" (California Secretary of State 2010)

Other venues of company engagement scrutinized in this study included:

- Corporate public relations
  - Executives' statements
  - Marketing campaigns
  - Website materials
- Annual reports
- Earnings calls with financial analysts
- Shareholder actions
- U.S. Securities and Exchange Commission (SEC) Form 10-K filings
- Internal Revenue Service (IRS) Form 990 annual report filings
- Congressional engagement
  - Political contributions
  - Lobbying expenditures
  - Congressional testimony

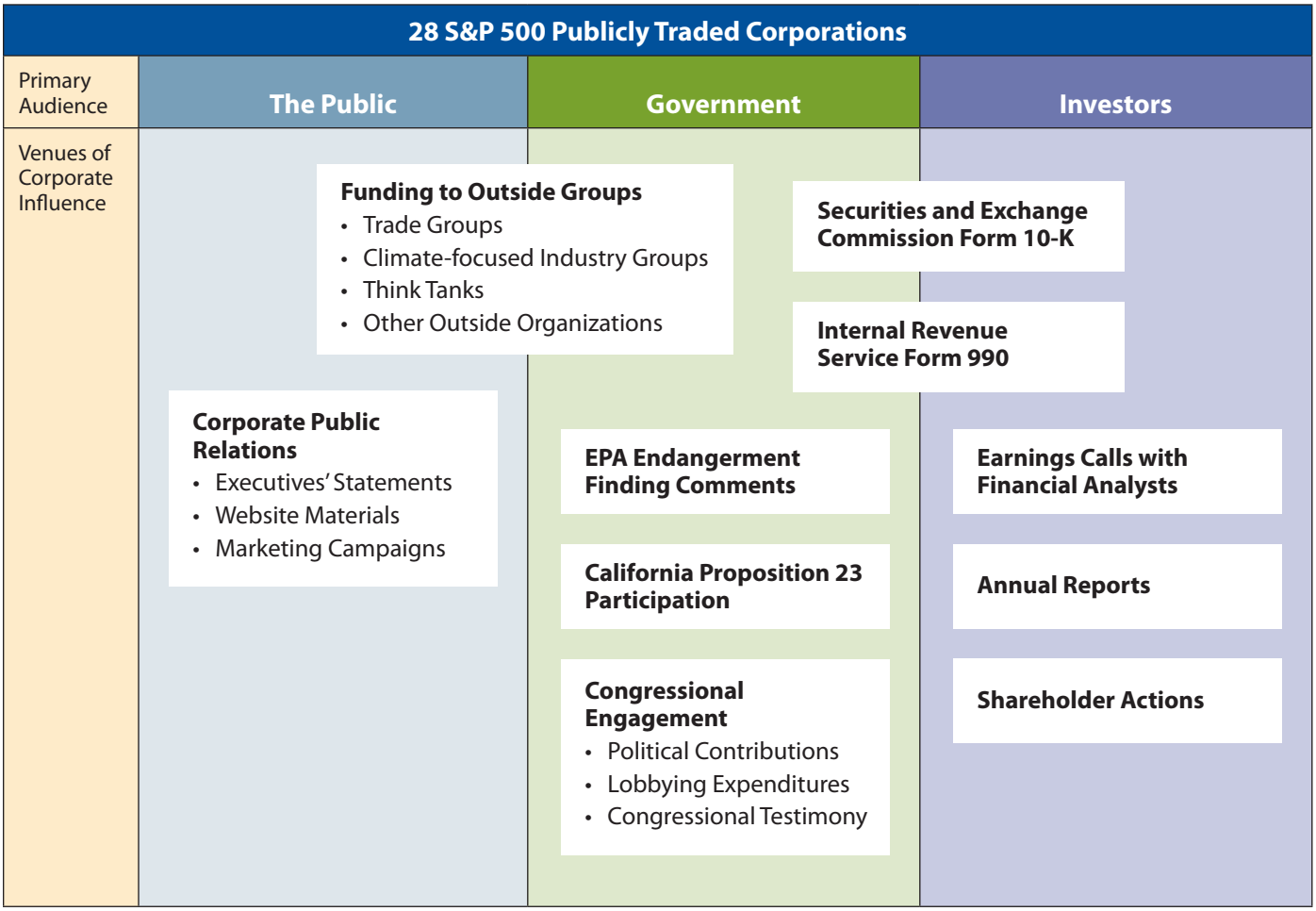
- Funding to outside organizations
  - Trade groups
  - Climate-focused industry groups
  - Think tanks
  - Other outside organizations

To evaluate the degree to which each company in our sample helped or hindered the climate science and policy dialogue during the study period, we considered the ensemble of corporate actions (Figure 1) taken by each company and categorized each one as Consistent, Contradictory, or Obstructionist. A detailed account of the methodology used for this report is available in Appendix A.

© Scott Lenger/Flickr

The 2007 Supreme Court ruling in *Massachusetts vs. EPA* required the agency to determine if heat-trapping gases posed a danger to public health and welfare, and thus needed to be regulated under the Clean Air Act. When the EPA put forward an "Endangerment Finding" in December 2007, the Bush administration refused to act on it. The Obama administration has allowed the agency to move forward and fulfill its obligations under the Clean Air Act.

FIGURE 1. Scope of Research



Corporations utilize a variety of venues, directed at different audiences, to engage in the conversation on climate science and policy.

CHAPTER 2

How Corporations Engage on Climate Science and Policy

Many of the companies in our sample used multiple venues to engage in discussions on climate change with different audiences, including the government, shareholders, and the public. In this chapter we describe some of the more interesting findings about corporate actions in each venue, and in Chapter 3 we assess the overall influence of each company. For a more extensive account of climate-change-related actions for each company in our sample, please see Appendix C: Company Profiles.

Direct Statements on Climate Change

Companies in our sample made many different, often divergent, statements about climate change to different audiences. Both energy producers and utility companies have a vested interest in climate policy, as it can significantly affect their businesses, yet some of these companies take very different positions on climate science and policy (Figure 2). For example, some utility companies in our sample—including NRG Energy, Inc., AES Corporation, and NextEra Energy, Inc.—have taken many actions in support of climate science and science-based policy, including endorsements of the EPA Endangerment Finding, acknowledgments of climate-related risks to business, and public announcements of their carbon mitigation efforts. By contrast, some energy sector companies in our sample, including Peabody Energy Corporation, Valero Energy Corporation, and Marathon Oil Corporation, have predominantly made statements—through their marketing campaigns, executives' public statements, congressional testimony, and EPA Endangerment Finding comments—that undermine established climate science and oppose carbon emissions standards.

While all companies in our sample stated they were taking voluntary internal action to reduce carbon emissions, half of them also misrepresented some element of established climate science in their public communications.

Some companies in non-energy-based sectors also chose to actively engage in discussions around climate change. NIKE, Inc., a consumer

© gribley / Flickr

Caterpillar Inc. and other companies use direct advertising to promote their position on climate change and climate-related policies.

FIGURE 2. Climate Actions for NRG Energy, Inc. and Peabody Energy Corporation

Supporting Climate Science or Science-Based Policy

"At NRG, we believe that global warming is one of the most significant challenges facing humankind—and we want to be part of the solution." (NRG website, 2011)

NRG

Relevant Spending

- Total political contributions: **$1,377,522**
- Total lobbying expenditures: **$5,740,000**
- Funding ratio of anti-climate to pro-climate members of Congress: **1 to 2.7**

Has Supported Nature Conservancy

ACTION: Declined membership in U.S. Chamber of Commerce due to its climate position

ACTION: Co-signed "Message to Barack Obama" favoring climate legislation

TRADE GROUP MEMBERSHIPS

- California Climate Action Registry
- Carbon Disclosure Project
- Global Roundtable on Climate Change
- Business Environmental Leadership Council
- U.S. Climate Action Partnership
- American Wind Energy Association*

* BOARD MEMBER

Opposing Climate Science or Science-Based Policy

"The greatest crisis society confronts is not a future environmental crisis predicted by computer models but a human crisis today that is fully within our power to solve . . . with coal." (Peabody website, 2011)

Peabody

Relevant Spending

- Total political contributions: **$684,283**
- Total lobbying expenditures: **$33,420,000**
- Funding ratio of anti-climate to pro-climate members of Congress: **4.0 to 1**

Has Supported George C. Marshall Institute

ACTION: Peabody funded the American Energy Security Study, which published stories that undermine established climate science

TRADE GROUP MEMBERSHIPS

- Alliance for Energy and Economic Growth
- American Coalition for Clean Coal Electricity
- Business Roundtable
- Center for Energy and Economic Development*
- National Association of Manufacturers*
- National Mining Association*
- U.S. Chamber of Commerce*

* BOARD MEMBER

Utility and energy sector companies have a vested interest in the outcome of climate policy debates, yet we observe companies in these sectors taking divergent positions on climate science and policy. Some utility and energy companies in our sample, such as NRG Energy, Inc., have taken many actions in support of climate science and science-based policy, while others, including Peabody Energy Corporation, have consistently tried to undermine climate science and oppose science-based policy. The full methodology for analysis of political contributions and lobbying expenditures is available in Appendix A. References for figure information can be found in Appendix C.

FIGURE 3. Climate Actions for NIKE, Inc. and FMC Corporation

Supporting Climate Science or Science-Based Policy

"We have committed to strategic collaboration through BICEP to push for U.S. energy and climate legislation and rule making." (NIKE website, 2011)

NIKE

Relevant Spending

- Total political contributions: **$175,601**
- Total lobbying expenditures: **$3,240,000**
- Funding ratio of anti-climate to pro-climate members of Congress: **1 to 3.2**

ACTION: Resigned from the board of directors of the U.S. Chamber of Commerce due to its climate position

ACTION: Co-signed "Message to Barack Obama" favoring climate legislation

TRADE GROUP MEMBERSHIPS

- Carbon Disclosure Project
- Ceres Business for Innovative Climate & Energy Policy (BICEP)
- U.S. Chamber of Commerce* (resigned board membership in 2009)

* BOARD MEMBER

Opposing Climate Science or Science-Based Policy

"CO_2 is fundmental to life and not a pollutant of any kind." (FMC EPA Endangerment Finding comments, 2009)

FMC

Relevant Spending

- Total political contributions: **$322,855**
- Total lobbying expenditures: **$12,430,000**
- Funding ratio of anti-climate to pro-climate members of Congress: **1.2 to 1**

Has Supported

Competitive Enterprise Institute

ACTION: Expressed doubt about climate science in EPA Endangerment Finding comments

TRADE GROUP MEMBERSHIPS

- Business Roundtable
- American Chemistry Council*
- National Association of Manufacturers*

* BOARD MEMBER

Some companies in non-energy-based sectors chose to actively engage in climate change discussions. NIKE, Inc., a consumer products manufacturer, took many actions in support of science-based climate policies, while FMC Corporation, a chemical manufacturer, took steps to spread misinformation on climate science and oppose policy efforts. The full methodology for analysis of political contributions and lobbying expenditures, including time frames, is available in Appendix A. References for figure information can be found in Appendix C.

products manufacturer, and Alcoa Inc., an aluminum producer, took many actions in support of science-based climate policies, while FMC Corporation, a chemical manufacturer, took steps to spread misinformation on climate science and oppose climate policy efforts (Figure 3).

Fourteen companies were inconsistent in regard to their statements about climate change. While all companies in our sample stated they were taking voluntary internal action to reduce carbon emissions, half of them also misrepresented some element of established climate science in their public communications. These companies included Ameren Corporation, Chesapeake Energy Corporation, ConocoPhillips, DTE Energy Company, Exxon Mobil Corporation, FMC Corporation, Marathon Oil Corporation, Murphy Oil Corporation, Occidental Petroleum Corporation, Peabody Energy Corporation, Progress Energy, Inc., TECO Energy, Inc., Valero Energy Corporation, and Waste Management, Inc. For a description of how we characterized the misrepresentation of science for this study, see Appendix A; for corporate statements on climate change from each company in our sample, see Appendix C.

In a time of heightened discussion around climate policies, all but three of the companies in our sample made statements about the negative implications that climate-change-related regulation could have for their business operations. Two

Indirect corporate actions enable a company to take positions and push agendas it might not otherwise do publicly.

companies, NRG Energy, Inc. and General Electric Company, stated that climate regulations would have a *positive* impact on their businesses, and we found no statement from Boeing Company on climate regulation impact. Almost half of the companies (12 of 28) acknowledged, in at least one public venue, the potential dangers posed by the impacts of climate change itself (as opposed to impacts of regulation).

© Greenweek/Flickr

Vice president of GE Ecomagination Steve Fludder speaks on the company's climate change mitigation efforts to European Union leadership in advance of the 2009 international climate talks in Copenhagen, Denmark.

Indirect Actions on Climate Change

In addition to scrutinizing companies' direct statements, we also examined indirect actions they took to influence the climate debate, including affiliations with outside organizations, political contributions, and lobbying expenditures. These actions are of particular importance in that, being less conspicuous than direct statements, they enable a company to take positions and push agendas it might not otherwise do publicly.

However, important caveats must be considered when analyzing indirect company actions. Although it is informative to examine these actions, we note that we cannot link them to climate-change-related activities specifically. Without greater transparency requirements for corporate affairs and government operations, we cannot isolate the particular issues on which companies lobbied or determine motivations for contributions to politicians and outside organizations.

For example, although all companies in our sample reported lobbying on the climate-relevant category of "Energy and Environment"—with the exception of Valero Energy Corporation, which reported on related topics of "Clean Air and Water"

© UCS/Gretchen Goldman

The U.S. Chamber of Commerce, which purports to represent millions of businesses, has aggressively opposed national science-based climate policy proposals.

and "Fuel, Gas, and Oil"—public disclosure forms go no further than this level of detail. Similarly, corporations donate to trade groups, think tanks, and other organizations that work on many public policy issues. Our results thus can only highlight companies that have supported organizations that work on climate science or policy; we cannot claim that their corporate contributions were allocated to climate-related work specifically.

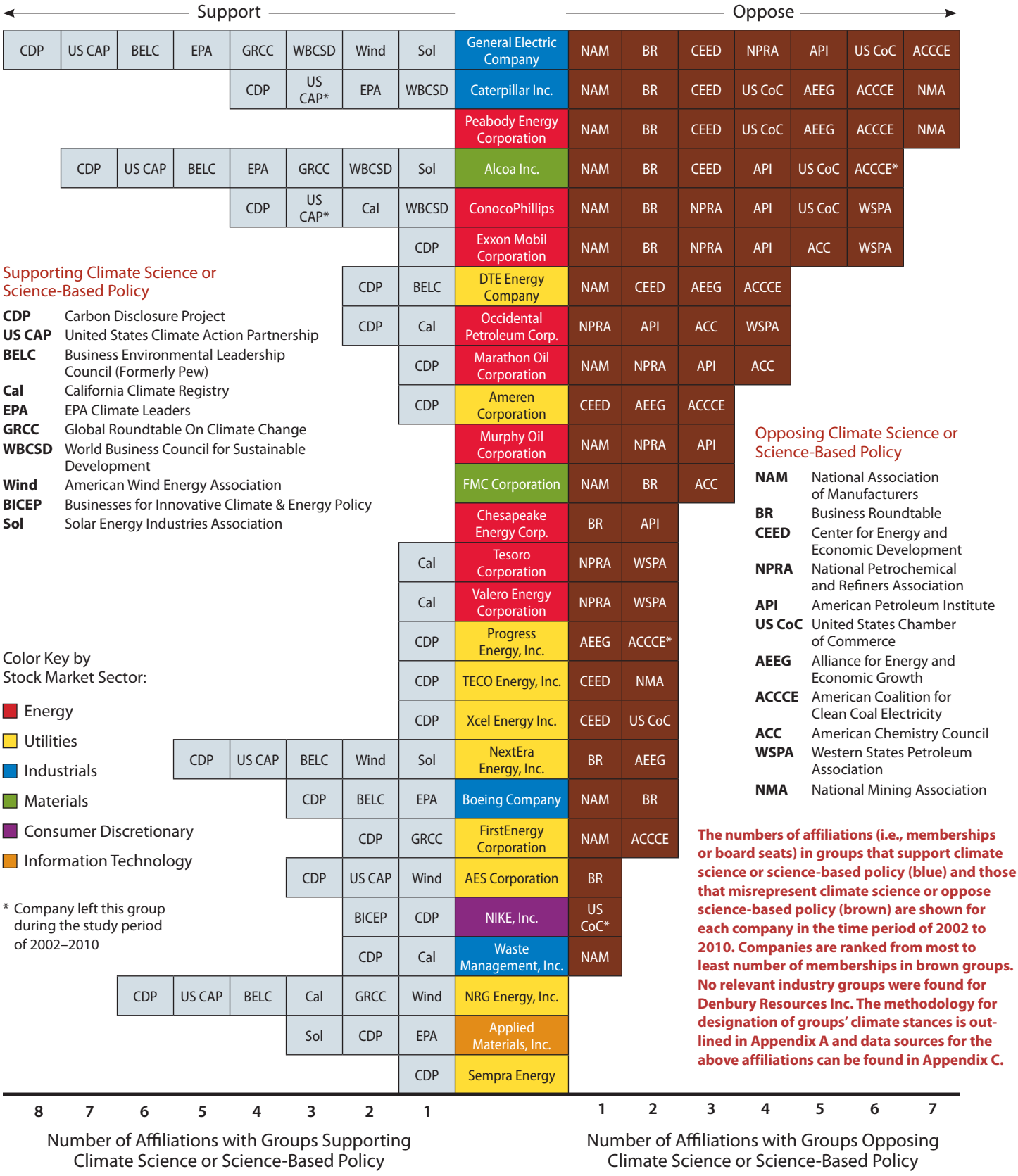
Given the inconspicuous ways in which companies can utilize supposedly independent groups to further their own agendas, the funding of industry groups is an important pathway through which corporations influence the national climate conversation without accountability.

Support for Outside Organizations

Corporations take indirect actions related to climate change through their memberships in, board seats on, and contributions to industry trade groups, think tanks, and other outside organizations that are actively involved in issues of climate science and policy. The detailed methodology for selection of the organizations included in this analysis, as well as for the determination of organizations' positions on climate science and policy, is outlined in Appendix A.

Industry Groups. Many companies in our sample have affiliations (i.e., memberships or board seats) with industry groups that take divergent stances on climate change (Figure 4). The groups we scrutinized ranged from industry trade associations such as the U.S. Chamber of Commerce, which serves multiple purposes and takes positions on a variety of policy issues, to entities formed specifically to advocate for climate policy, such as the U.S. Climate Action Partnership (US CAP), which was formed in 2007 by 14 businesses

FIGURE 4. Affiliations with Industry Groups That Support or Oppose Climate Science and Science-Based Policy



Supporting Climate Science or Science-Based Policy

- **CDP** Carbon Disclosure Project
- **US CAP** United States Climate Action Partnership
- **BELC** Business Environmental Leadership Council (Formerly Pew)
- **Cal** California Climate Registry
- **EPA** EPA Climate Leaders
- **GRCC** Global Roundtable On Climate Change
- **WBCSD** World Business Council for Sustainable Development
- **Wind** American Wind Energy Association
- **BICEP** Businesses for Innovative Climate & Energy Policy
- **Sol** Solar Energy Industries Association

Opposing Climate Science or Science-Based Policy

- **NAM** National Association of Manufacturers
- **BR** Business Roundtable
- **CEED** Center for Energy and Economic Development
- **NPRA** National Petrochemical and Refiners Association
- **API** American Petroleum Institute
- **US CoC** United States Chamber of Commerce
- **AEEG** Alliance for Energy and Economic Growth
- **ACCCE** American Coalition for Clean Coal Electricity
- **ACC** American Chemistry Council
- **WSPA** Western States Petroleum Association
- **NMA** National Mining Association

Color Key by Stock Market Sector:

- Energy
- Utilities
- Industrials
- Materials
- Consumer Discretionary
- Information Technology

* Company left this group during the study period of 2002–2010

The numbers of affiliations (i.e., memberships or board seats) in groups that support climate science or science-based policy (blue) and those that misrepresent climate science or oppose science-based policy (brown) are shown for each company in the time period of 2002 to 2010. Companies are ranked from most to least number of memberships in brown groups. No relevant industry groups were found for Denbury Resources Inc. The methodology for designation of groups' climate stances is outlined in Appendix A and data sources for the above affiliations can be found in Appendix C.

and environmental organizations to call for federal carbon emissions standards (US CAP 2012).

For example, ConocoPhillips, Caterpillar Inc., General Electric Company, and Alcoa Inc. each had affiliations with at least four industry organizations on each side of the aisle with respect to the climate debate.

The American Coalition for Clean Coal Electricity and the American Petroleum Institute have made efforts to fabricate larger grassroots backing for their work.

A few companies, however, belonged exclusively to industry groups with the same position on climate change. For example, NRG Energy, Inc.

© America's Power

The American Coalition for Clean Coal Electricity, which is funded by and represents the interests of coal producers, transporters, and utilities, is affiliated with the America's Power campaign which launched a 2010 national tour to promote policies that support coal production.

was affiliated only with groups supporting climate science or science-based policy while Chesapeake Energy Corporation, FMC Corporation, Murphy Oil Corporation, and Peabody Energy Corporation were affiliated only with groups opposing climate science or science-based policy. In general, companies in the energy sector were more likely to be affiliated with industry groups opposing science-based climate policy.

Several of the industry organizations in Figure 4, such as the Center for Energy and Economic Development, conceal the funding and agendas of the industries behind them. Through these front groups, companies can push their agendas more aggressively without public accountability.

Moreover, so-called "astroturf" organizations and campaigns are designed to appear as spontaneous and popular grassroots efforts (Dunlap and McCright 2011). For example, both the American Coalition for Clean Coal Electricity and the American Petroleum Institute have made efforts to fabricate larger grassroots backing for their work by encouraging employees to show up at rallies or by launching media advertisements that imply widespread public support (Dunlap and McCright 2011; Krauss and Mouawad 2009).

Given these inconspicuous ways in which companies can utilize supposedly independent groups to do their bidding, the funding of industry groups is an important pathway through which corporations influence the national climate conversation without accountability (Mashey 2010; UCS 2007).

It is worth noting, however, that in some cases companies have chosen to publicly leave such industry groups because of dissatisfaction with the groups' position on climate change. NIKE, Inc., for example, vocally resigned from the board of directors of the U.S. Chamber of Commerce in 2009, citing Chamber actions that were "inconsistent with our view that climate change is an issue in need of urgent action" (Korosec 2009).

Think Tanks and Other Outside Organizations. Our sample companies also had affiliations with think tanks and other outside organizations with divergent views on climate change. These organizations, highlighted in Figure 5, range from groups that largely do independent scientific analyses and receive funding from a diversity of sources (e.g., Brookings Institution and World Resources Institute [Brookings Institution 2011; WRI 2012b]) to groups that are funded, mainly by industry, to oppose climate and other science-based regulations, often through the spread of misinformation about climate science (e.g., Heartland Institute, George C. Marshall Institute, and Competitive Enterprise Institute [Oreskes and Conway 2010; Hoggan and Littlemore 2009; Begley et al. 2007]).

For example, Exxon Mobil Corporation has funded climate-science-supporting groups such as Brookings Institution and The Center for Clean Air Policy (Antholis and Talbott 2010), while also donating to groups such as the Heritage Foundation and the Committee for a Constructive Tomorrow (Oreskes and Conway 2010) known to misrepresent established climate science.

FIGURE 5. Affiliations with Think Tanks and Other Organizations That Support or Misrepresent Climate Science

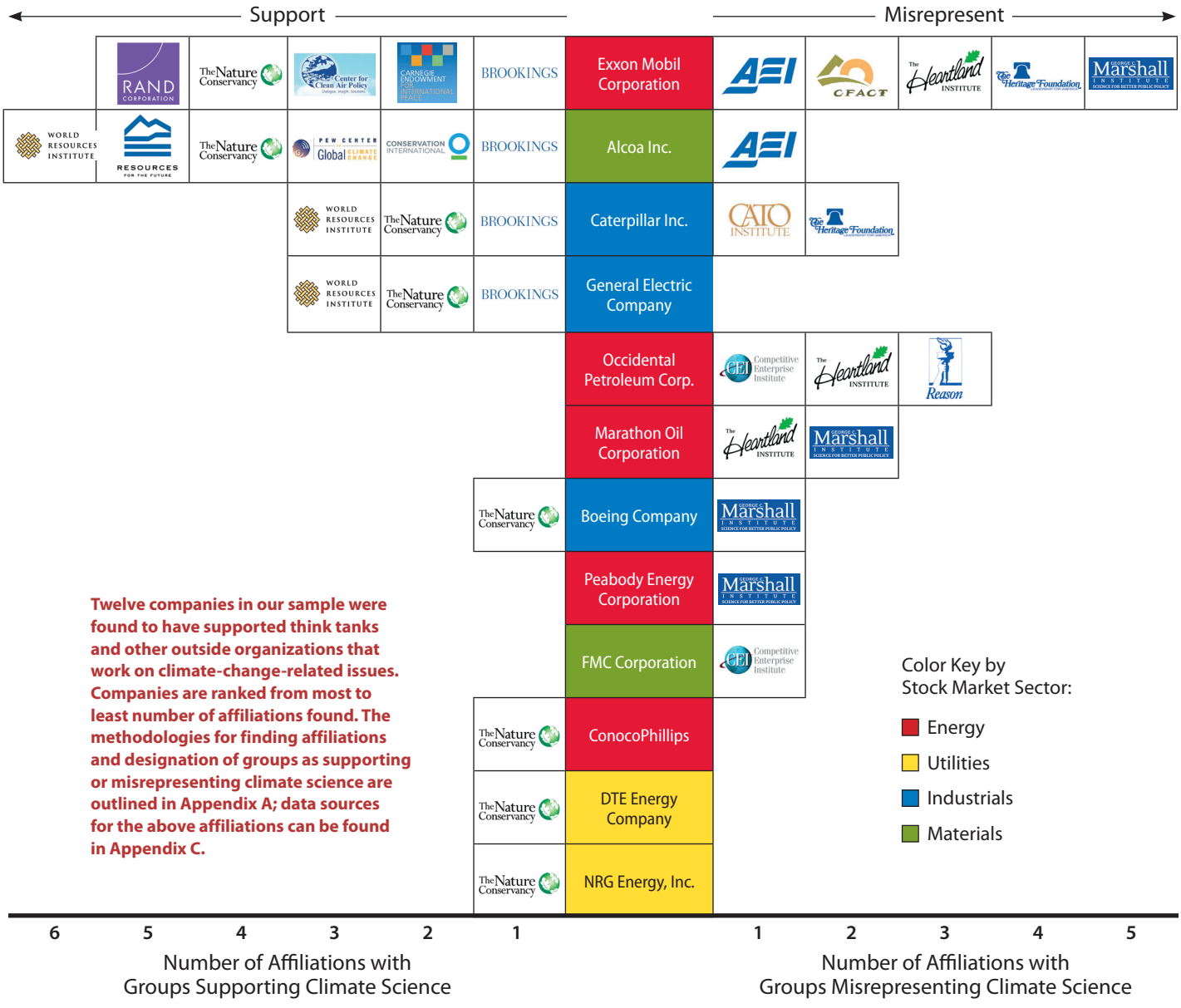


TABLE 1. Political Contributions and Lobbying Expenditures Ranked by Funding Ratio

Company	Anti-Climate : Pro-Climate Ratio	Total Political Contributions	Total Lobbying (in millions)
Murphy Oil Corporation	29 : 1	$30,000	$5.71
ConocoPhillips	15.4 : 1	$742,951	$62.71
Marathon Oil Corporation	14.7 : 1	$762,950	$43.72
Exxon Mobil Corporation	10.1 : 1	$1,556,961	$131.63
Valero Energy Corporation	9.3 : 1	$1,490,472	$4.63
Chesapeake Energy Corporation	5.3 : 1	$584,400	$5.33
Caterpillar Inc.	4.9 : 1	$990,961	$16.38
Occidental Petroleum Corporation	4.9 : 1	$689,250	$28.21
Peabody Energy Corporation	4.0 : 1	$684,283	$33.42
Denbury Resources Inc.	2.8 : 1	$34,450	$1.55
NextEra Energy, Inc.	1.9 : 1	$1,377,522	$3.20
Tesoro Corporation	1.7 : 1	$323,800	$1.26
TECO Energy, Inc.	1.6 : 1	$311,850	$14.59
DTE Energy Company	1.5 : 1	$874,678	$12.98
FirstEnergy Corporation	1.5 : 1	$828,845	$16.50
Progress Energy, Inc.	1.4 : 1	$659,051	$16.67
Xcel Energy Inc.	1.3 : 1	$626,925	$17.25
Waste Management, Inc.	1.3 : 1	$149,020	$5.58
FMC Corporation	1.2 : 1	$322,855	$12.43
Boeing Company	1 : 1.3	$4,517,635	$107.29
General Electric Company	1 : 1.4	$5,076,353	$189.91
Ameren Corporation	1 : 1.9	$484,900	$19.20
Applied Materials, Inc.	1 : 1.9	$224,354	$6.68
Sempra Energy	1 : 2.0	$634,975	$14.06
NRG Energy, Inc.	1 : 2.7	$1,377,522	$5.74
Alcoa Inc.	1 : 2.7	$30,450	$13.82
NIKE, Inc.	1 : 3.2	$175,601	$3.24
AES Corporation	1 : 5.4	$101,504	$1.32

Color Key by Stock Market Sector:

Energy | Utilities | Industrials | Materials | Consumer Discretionary | Information Technology

Total political contributions and lobbying expenditures are shown for all companies, ranked by their ratio of a:b, where "a" stands for funding to members of Congress with voting records that oppose science-based climate policy ("anti-climate") and "b" represents funding to those who support it ("pro-climate"). Lobbying expenditures occurred in the 2002–2010 time frame; voting and political contribution time frames correspond to 2007–2010 for House members and 2003–2010 for senators. The full methodology for analysis of political contributions and lobbying expenditures is available in Appendix A.

Political Contributions and Lobbying

Our investigation of political contributions and lobbying expenditures shows wide disparities among companies. Table 1 displays these two types of information, ranked by the ratio of a:b, where "a" stands for political contributions to members of Congress with voting records *opposing* science-based climate policy ("anti-climate") and "b" represents contributions to members of Congress with voting records *supporting* science-based climate policy ("pro-climate") (see Appendix A for methodology). Table 2 shows much the same information, ranked by the total dollar amount that companies reported spending on lobbying. Moreover, only those companies with lobbying expenditures greater than $15 million between 2002 and 2010 are listed in Table 2.

General Electric Company, Boeing Company, and Exxon Mobil Corporation spent significantly more in political contributions and lobbying expenditures than the rest of the companies in our sample. With the exception of Caterpillar Inc., all the companies donating most heavily to anti-climate members of Congress were in the energy sector, with eight of the 10 energy sector companies in our sample donating three times more to anti-climate candidates than to pro-climate candidates. By contrast, only five companies (AES Corporation, Alcoa Inc., NRG Energy, Inc., Sempra Energy, and NIKE, Inc.) donated at least twice as much to pro-climate candidates as to anti-climate candidates, and none of these companies were in the energy sector.

Most companies in our sample had lobbying expenditures that dwarfed their contributions to individual candidates.

Most companies in our sample had lobbying expenditures that dwarfed their contributions to individual candidates. For instance, Marathon Oil Corporation spent $43.7 million on federal

TABLE 2. Political Contributions and Lobbying Expenditures Ranked by Lobbying Totals for Top Lobbying Companies

Company	Anti-Climate : Pro-Climate Ratio	Total Political Contributions	Total Lobbying (in millions)
General Electric Company	1 : 1.4	$5,076,353	$189.91
Exxon Mobil Corporation	10.1 : 1	$1,556,961	$131.63
Boeing Company	1 : 1.3	$4,517,635	$107.29
ConocoPhillips	15.4 : 1	$742,951	$62.71
Marathon Oil Corporation	14.7 : 1	$762,950	$43.72
Peabody Energy Corporation	4.0 : 1	$684,283	$33.42
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Progress Energy, Inc.	1.4 : 1	$659,051	$16.67
FirstEnergy Corporation	1.5 : 1	$828,845	$16.50
Caterpillar Inc.	4.9 : 1	$990,961	$16.38

Color Key by Stock Market Sector: Energy Utilities Industrials

Total political contributions and lobbying expenditures are shown for companies spending more than $15 million in lobbying expenditures during the 2002–2010 period. Companies are ranked by total lobbying expenditures.

Corporate Giving

Making donations to outside organizations is one way for corporations to influence the conversation on climate change. Several legal categories of tax-exempt organizations can accept corporate donations; four such categories relevant to this report are outlined below.

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501(c)(3) Groups are commonly referred to as "charitable organizations" and include all of the organizations listed in Figure 5 (p. 15).

Political Activity: 501(c)(3) organizations cannot support or oppose candidates for public office or political parties, nor can they do more than an "insubstantial" amount of lobbying. They can only engage in issue advocacy, such as publishing research about public policy issues, and in certain permitted election activities, such as organizing voter registration drives.

Donor Disclosure: Donations generally do not have to be disclosed to the general public unless a company donates through a corporate foundation. Independent estimates suggest that roughly 30 percent of corporate giving is done through foundations (Giving USA Foundation 2011).

501(c)(4), 501(c)(5), and 501(c)(6) Groups have similar restrictions. 501(c)(4) groups are known as "social welfare organizations" and include entities such as the U.S. Climate Action Partnership. 501(c)(5) groups are largely labor unions, such as the AFL-CIO, and 501(c)(6) groups are trade associations and professional organizations, including, for example, the National Association of Manufacturers and the U.S. Chamber of Commerce.

Political Activity: These groups can use their treasury to do an unlimited amount of lobbying that represents their members' interests, to engage in issue advocacy, and to directly intervene in elections by endorsing specific candidates for office so long as direct political activity is not their "primary purpose." These groups cannot donate to a campaign or coordinate their activities with a campaign, but they can set up their own political action committee (PAC) to contribute directly to candidates. Such PACs are subject to contribution and disclosure regulations similar to those of Corporate PACs, discussed below.

Donor Disclosure: Donations do not have to be disclosed to the general public unless they are made through a corporate foundation or earmarked for a specific political communication.

Corporate PACs are PACs set up by a corporation. They are technically referred to as "separate segregated funds" because their finances are kept strictly apart from the corporate treasury.

Political Activity: Corporate PACs can donate directly to candidates for office, to the candidates' PACs, and to party committees, but they are subject to limits on the donations they can accept and the expenditures they can make.

Donor Disclosure: Corporate PACs are required to disclose information about their donations to the general public.

Super PACs, a new type of entity, are sometimes referred to as "independent expenditure committees" because their spending must be independent of political campaigns. Super PACs arose in 2010 following the decision of the U.S. Supreme Court in *Citizens United vs. FEC* and the subsequent decision of the D.C. Circuit Court of Appeals in *SpeechNow.org vs. FEC*.

Political Activity: Super PACs can directly intervene in elections—for example, by running ads endorsing specific candidates for office or praising their stances on particular issues—but they cannot donate to campaigns or coordinate their activities with a campaign.

Donor Disclosure: Donations to Super PACs have to be disclosed to the general public unless the donation is routed through a 501(c)(4), 501(c)(5), or 501(c)(6) group, which does not have to disclose its donors.

This information was compiled from IRS 2012, FEC 2011, Garrett 2011a, Garrett 2011b, Lunder 2010, and Bizzel 2004.

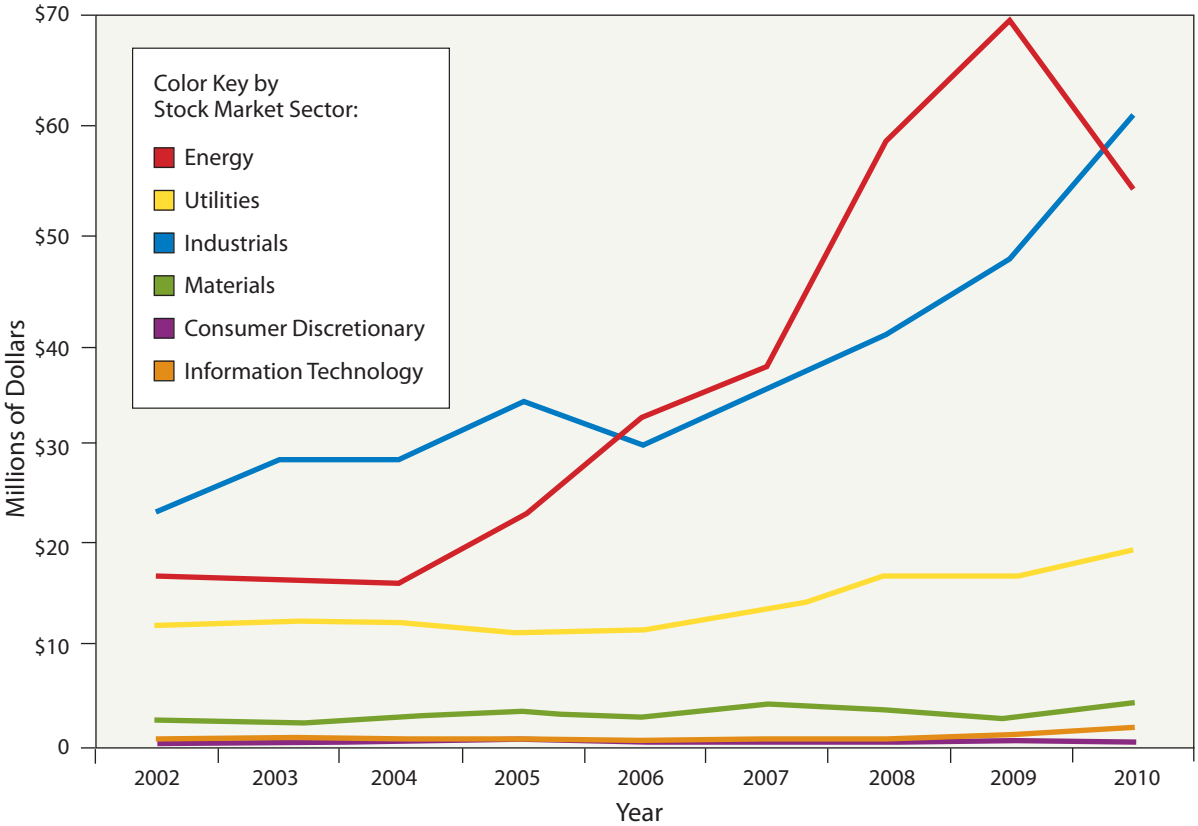
lobbying from 2002 to 2010, but its PAC donated only $1.2 million to individual candidates in the four election cycles from 2004 to 2010 (Andoni and Jaime 2011).

For companies in the energy sector, lobbying expenditures increased by 92 percent from 2007 to 2009, when climate change bills were being actively debated in Congress (Figure 6). Although these results were driven to some extent by companies with the largest lobbying expenditures—notably Boeing Company and General Electric Company, which dominated the industrials sector's trend—we observe that total lobbying expenditures for all companies in our sample increased 160 percent between 2002 and 2010 (during which time inflation was only 21.2 percent).

Photo courtesy of the Select Committee on Energy Independence and Global Warming

In 2009 and 2010, Congress held several hearings on climate change, inviting company executives to testify on the impact that climate regulations might have on their businesses.

FIGURE 6. Total Lobbying Expenditures by Stock Market Sector, 2002–2010



We observe a 92 percent rise in lobbying by the energy sector companies in our sample between 2007 and 2009, when climate change bills were being actively debated in Congress. Some sector trends were influenced by individual companies with larger lobbying expenditures and some sectors included only a single company from our sample. For example, NIKE, Inc. was the sole representative of the consumer discretionary sector and Applied Materials, Inc. was the one company in the information technology sector.

CHAPTER 3

Who Helps and Who Hinders the Climate Conversation

In this chapter, we analyze results on a company-by-company basis in order to evaluate the degree to which the companies in our sample have helped or hindered the dialogue on climate science and policy.

Where Companies Stand on Climate Change

Our research shows that companies span a wide range in their representations of climate change. The public statements of some companies are consistent with their actions in supporting science-based climate policy and pro-science policy makers. At the other end of the spectrum are companies that have taken many steps to inhibit science-based climate policy, despite their statements of commitment to reducing carbon emissions.

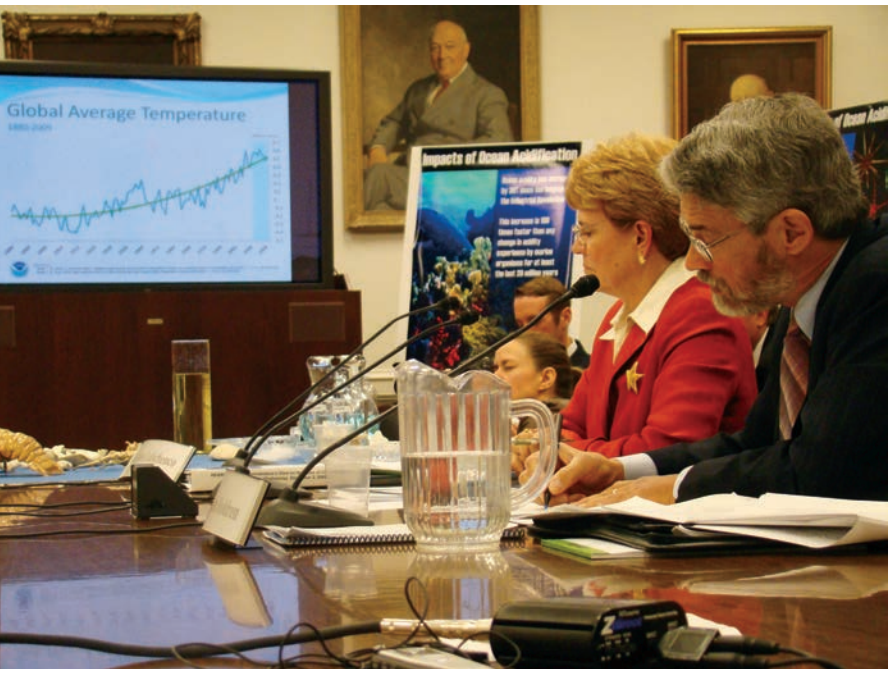


Photo courtesy of the Select Committee on Energy Independence and Global Warming

Policy makers should rely on scientific advice from experts, not special interests, to make decisions that will affect public health and the environment.

But many companies fall between these two extremes, supporting climate science and policy in some venues and opposing them in others.

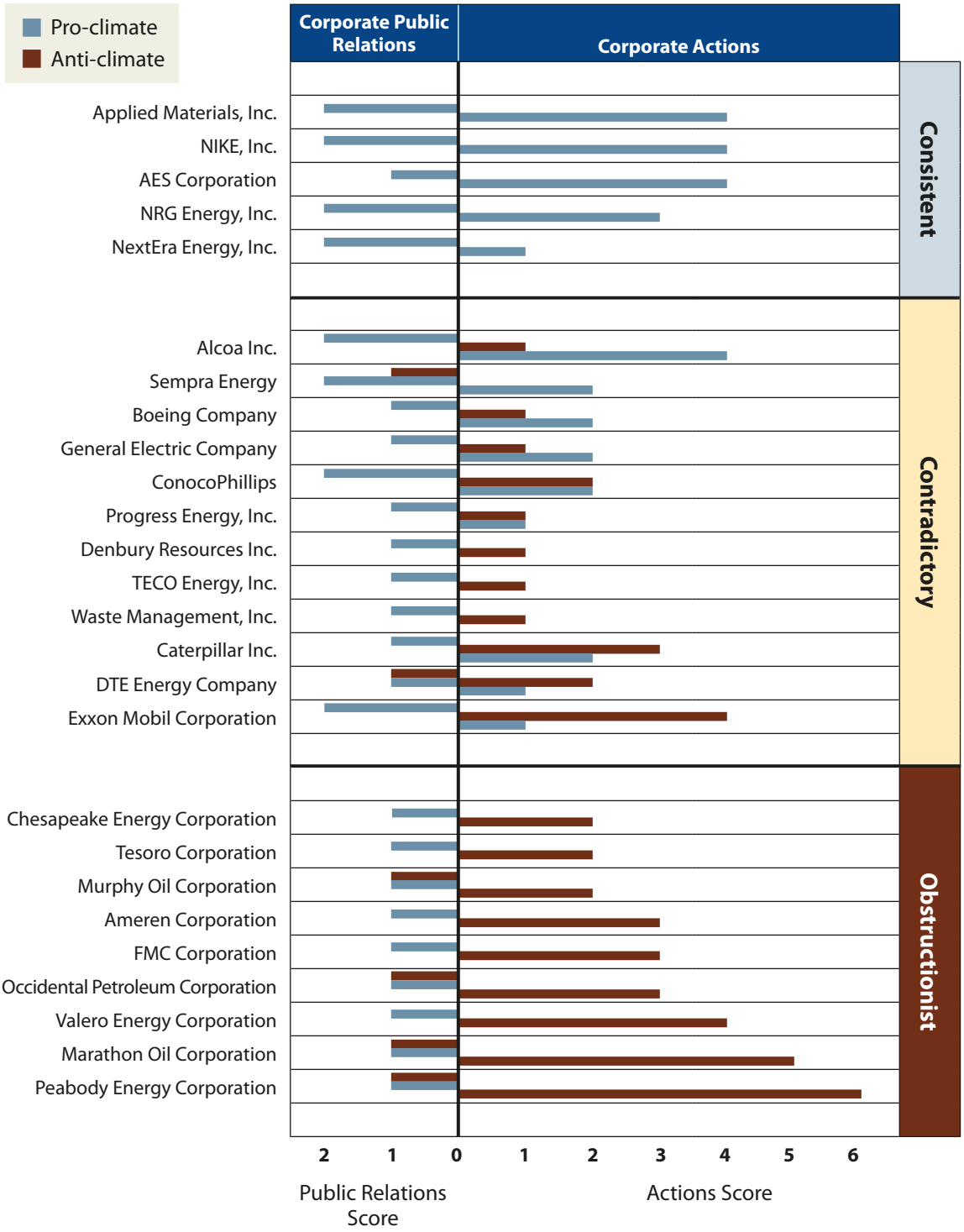
The inconsistency of some companies contributes to misunderstandings among policy makers and the public about the state of climate science.

This inconsistency contributes to misunderstandings among policy makers and the public about the state of climate science.

In Figure 7, we identify company statements and actions that were either in support of or in opposition to climate science and policy, and we make a distinction between corporate public relations and corporate actions (which include, for example, conversations with the federal government and the funding of think tanks and other outside organizations). This distinction allows us to compare how companies behave in front of two different audiences: the general public, and decision makers and opinion leaders.

Company statements and actions are considered "pro-climate" (blue) if they aligned with climate science or supported the implementation of science-based climate policies. Statements and actions are identified as "anti-climate" (brown) if they conflicted with the scientific consensus on climate change or otherwise inhibited progress toward developing and implementing science-

FIGURE 7. Summary of Corporate Statements and Actions on Climate Change Science and Policy



This figure, which quantifies the statements and actions taken by companies across multiple venues, allows us to categorize company behavior on climate science and science-based policy. All statements and actions included in this figure are weighted equally under our methodology, though we recognize that they are not equal in terms of their degree of influence on the climate discussion. FirstEnergy Corporation and Xcel Energy Inc. are not included in this figure because their corporate actions on climate change were of insufficient number for categorization. The full methodology for this figure is described in Appendix A.

Publicly traded companies are under tremendous pressure to maximize short-term profits and meet shareholder demands, despite the fact that emissions-reduction strategies can save money and protect public health over the long term.

based climate policies (see Appendix A for the full methodology).

To further underscore the impacts of our sample companies on the climate conversation, we overlay three broad categories of company behavior: Consistent, Contradictory, and Obstructionist. Companies are identified as Consistent if they predominantly took actions that supported climate science and policy. Companies are considered Contradictory if they took some actions in support of climate science and policy but also took actions in opposition. Finally, companies that predominantly took actions that challenged the scientific consensus on climate change or that inhibited science-based climate policies, despite public statements of concern about climate change, are identified as Obstructionist.

Valero Energy Corporation donated more than $4 million to the Yes on Prop 23 campaign, which sought to undermine emissions regulation in California.

Figure 7 provides a useful tool for assessing the net impact of each company; however, three limitations to this approach are important to note.

First, all statements and actions included in this figure are weighted equally under our methodology, though we recognize that they are not equal in terms of their degree of influence on the climate debate. For example, the statement on Exxon Mobil Corporation's website expressing concern for climate change is likely to have far less of an impact than the company's donation of $441,500 between 2002 and 2006 to the Heartland Institute, which aggressively spreads misinformation on climate change (Mann 2012; Hoggan and Littlemore 2009) (see Appendix C). Even within action types, there were broad differences between companies. For example, Valero Energy Corporation donated more than $4 million to the Yes on Prop 23 campaign, which sought to undermine emissions regulation, whereas

General Electric Company indirectly donated just $5,000 to the campaign through its membership in the American Coalition for Clean Coal Electricity (Ballotpedia 2012).

Second, because Figure 7 examines actions over several years, some companies, such as San Diego-based Sempra Energy, may fall into the Contradictory category because of changes in company position on global warming during that period. In 2006, Sempra CEO Donald Felsinger publicly misrepresented climate science, stating in an interview with the *Union-Tribune*: "There definitely is a debate about global warming. . . . The coal industry says there is no evidence of global warming. I don't think the science supports either side" (Davis 2008). However, by 2008, Felsinger appeared to have accepted the scientific evidence for climate change, stating in an interview with *voiceofsandiego.org* that, "I think that debate [over whether global warming is real] is over. The Earth is getting warmer" (Davis 2008). Since that time, Sempra has taken several commendable actions in support of climate-science-based policy action: it publicly advocated for federal carbon emissions standards, participated in the Carbon Disclosure Project, and donated $25,000 to the No on Prop. 23 campaign (see Appendix C).

And third, Figure 7 is constrained by the fact that companies are placed in one of the three categories based solely on the company actions uncovered in this report. Actions outside the venues we studied for this report or outside the study period (2002 to 2010) are not considered in the categorizations.

Despite these limitations, it remains instructive to take a collective look at company behavior during this key period of elevated national discussions surrounding climate science and policy.

Companies with Contradictory Actions

When policy makers debate potential responses to climate change, companies of course have the right to weigh in on the consequences, economic and otherwise, that different policy options may have on their operations; however, it is inappropriate for them to spread misinformation about the science that informs the discussion.

"I think that debate [over whether global warming is real] is over. The Earth is getting warmer."

— Sempra Energy CEO Donald Felsinger, 2008

In Figure 8 (p. 24), we show venues where specific companies acknowledged the scientific consensus on climate change or committed to addressing the challenge, and we contrast these expressions with venues where the same companies misrepresented established climate science.

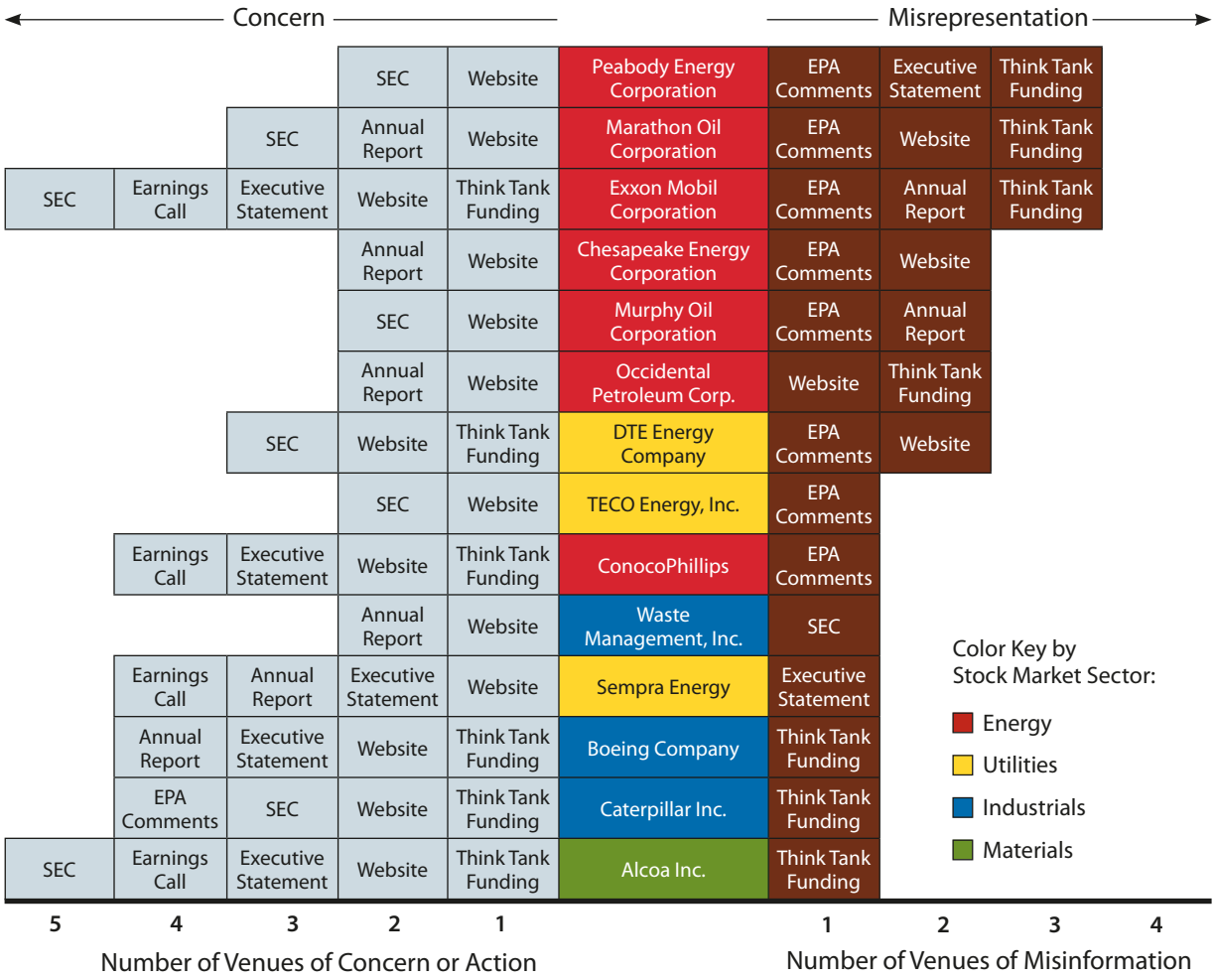
Examining the most contradictory players in our sample, we find that companies are more likely to express commitment or concern about climate change in venues directed at the general public, such as their corporate websites, and that companies are more likely to misrepresent climate science through their funding of outside organizations or in venues directed at the federal government, such as corporate comments in response to the EPA Endangerment Finding.

Waste Management, Inc. is one of several companies that engage in green marketing campaigns. Through these campaigns, companies express concern about their environmental impact and frame their business practices as environmentally conscious. However, without greater transparency in corporate affairs, it can be difficult for consumers and investors to know if these companies' actions are consistent with their claims.

Interestingly, no companies in our sample misrepresented climate science in their earnings calls, when executives talk to financial analysts about their companies' financial performance. Despite misrepresenting climate science in other venues during our time period of study, several companies expressed concern in their earnings calls about climate change or commitment to mitigation actions. This observation suggests that some companies tend to misrepresent climate science when they are speaking with policy makers or the public, but when it comes to their own corporate financial health they take climate change seriously.

Looking at specific companies, we find several illustrative instances of contradictory behavior, most prominently from companies in the energy sector. Exxon Mobil Corporation and ConocoPhillips, for example, both exhibited inconsistent

FIGURE 8. Venues Where Contradictory Companies Express Concern about Climate Change or Misrepresent Climate Science



This figure lists only those companies in our sample that misrepresented climate science in at least one of their actions, and compares venues of climate misinformation with venues where these same companies expressed commitment or concern about climate change or stated that they were taking internal actions to deal with climate change. Here, "Annual Report" refers to a company's annual report to company investors, "SEC" refers to a company's annual Form 10-K filing with the U.S. Securities and Exchange Commission, and "Think Tank Funding" refers to a company's contributions to the think tanks and other outside groups featured in Figure 5.

behavior during our study period that can be exemplified by highlighting their congressional testimony. Although corporate executives testifying in Congress are under oath, and therefore have a legal obligation to tell the truth to policy makers, they sometimes express opinions in such testimony that do not align with their statements and actions in other venues.

Exxon Mobil Corporation (Figure 9, p. 26) is well known for having heavily funded skeptic organizations that spread misinformation about climate science (Hoggan and Littlemore 2009; UCS 2007). In a 2008 congressional hearing, a company executive took exception to a senator's allegation that Exxon Mobil was "supporting junk science and trying to make people think that [climate change] is not an issue." The executive replied, "I think all of us recognize it is an issue . . . and I think we are dealing with it, and we are doing so in a responsible fashion" (Simon 2008). Despite this claim and a company announcement that same year that Exxon Mobil would stop funding skeptic organizations, results from investigations (this one and others) indicate that the company has continued to make public statements that doubt climate science and to fund and affiliate with groups that spread misinformation (Adam 2009).

ConocoPhillips (Figure 10, p. 28) provides another example of the inconsistency of executive congressional testimony with corporate behavior elsewhere. At a May 2008 hearing before the Senate Judiciary Committee, a company executive testified, "ConocoPhillips has acknowledged the scientific consensus that human activity. . . is contributing to increased concentrations of greenhouse gases in the atmosphere that can lead to adverse changes in global climate" (Lowe 2008). He further stated that the company supported "a mandatory national framework in the U.S. for reducing carbon dioxide emissions" (Lowe 2008). Yet shortly before climate legislation was introduced in the Senate in February 2010, ConocoPhillips (along with Caterpillar Inc., BP, Marsh, and Xerox) withdrew from the U.S. Climate Action Partnership, a group of corporations that advocates for policy action (Burnham 2010). Subsequently, ConocoPhillips began criticizing the legislation, and it set up a political-action webpage asking employees to call legislators and express opposition to that climate bill (ConocoPhillips 2009).

Photo courtesy of the Select Committee on Energy Independence and Global Warming

Following a 2008 House hearing on oil company profits and energy alternatives, ConocoPhillips President John Lowe is questioned by the media. Mr. Lowe and other companies' executives have made statements in congressional testimony that are not consistent with their companies' actions.

Companies are more likely to express commitment or concern about climate change in venues directed at the general public, and more likely to misrepresent climate science through their funding of outside organizations or in venues directed at the federal government.

Marathon Oil Corporation also demonstrated inconsistent behavior during our study period. While Marathon claims on its website to "recognize and share concerns about climate change," participates in the Carbon Disclosure Project, and has even publicly advocated for a carbon tax (see Appendix C), the company has also taken several

FIGURE 9. Climate Actions for Exxon Mobil Corporation

Supporting Climate Science or Science-Based Policy

"Rising greenhouse-gas emissions pose significant risks to society and ecosystems. Since most of these emissions are energy-related, any integrated approach to meeting the world's growing energy needs over the coming decades must incorporate strategies to address the risk of climate change." (Exxon Mobil website, 2011)

Has Supported

Brookings Institution

Carnegie Endowment for International Peace

Nature Conservancy

RAND Corporation

ACTION: Funds the Global Climate and Energy Project at Stanford University, which conducts research on new technologies to reduce heat-trapping emissions

ACTION: Ran print ads in mainstream newspapers with slogans such as "Tackling climate risks with technology" in the fourth quarter of 2009

TRADE GROUP MEMBERSHIP

- Carbon Disclosure Project

Opposing Climate Science or Science-Based Policy

"While the [EPA] proposal includes support for the existence of climate change, support for the effects of climate change on public health and welfare is almost non-existent and engulfed in an extremely high degree of uncertainty." (Exxon Mobil EPA Endangerment Finding comments, 2009)

ExxonMobil

Relevant Spending

- Total political contributions: **$1,556,961**
- Total lobbying expenditures: **$131,630,000**
- Funding ratio of anti-climate to pro-climate members of Congress: **10.1 to 1**

Has Supported

American Enterprise Institute

Committee for a Constructive Tomorrow

George C. Marshall Institute

Heartland Institute

Heritage Foundation

ACTION: Continues to fund lobbying groups that undermine climate science despite a public pledge to cut support for climate denial

TRADE GROUP MEMBERSHIPS

- American Chemistry Council*
- American Petroleum Institute*
- Business Roundtable
- National Association of Manufacturers*
- Western States Petroleum Association

* BOARD MEMBER

Several energy sector companies in our sample were found to be inconsistent in their actions related to climate change, and Exxon Mobil Corporation was among the most contradictory. It took actions in support of climate science and policy in some venues while undermining climate science and policy in others. References for figure information can be found in Appendix C.

steps to undermine climate science and block policy action. Marathon claimed that the EPA Endangerment Finding lacked evidence linking anthropogenic emissions to climate change, and the company has been linked to two climate misinformation-spreading think tanks, the George C. Marshall Institute and the Heartland Institute (Mann 2012; Hoggan and Littlemore 2009; Begley et al. 2007) (see Appendix C). Further, a 2009 company memo revealed that Marathon CEO Clarence Cazalot urged his employees to oppose the Waxman-Markey climate legislation on the grounds that it "will be an enormous hidden tax on all Americans," and he encouraged them to take political action against the bill (Cazalot and Peters 2009).

Caterpillar Inc. (Figure 11, p. 29) provides an example of contradictory actions among companies from the industrials sector. Caterpillar boasts about its strong commitment to sustainability, including climate change mitigation strategies, on its website. In its SEC Form 10-K, the company noted that it had continued "its commitment to make sustainable development a 'strategic area of improvement'" and it highlighted its recognition as a member of the Dow Jones Sustainability World Index for nine consecutive years (SEC 2009) (see Appendix C). Behind this climate-concerned public image, however, Caterpillar serves on the boards of two outspokenly anti-climate-science trade groups (the U.S. Chamber of Commerce and the National Association of Manufacturers) and it funds the Cato Institute and the Heritage Foundation, two think tanks that misrepresent climate science (Oreskes and Conway 2010) (see Appendix C).

Some companies from the utilities sector also exemplified contradictory actions on climate change. Michigan-based DTE Energy Company (Figure 12, p. 30), for example, has been commended for its professional practices on climate change disclosure and the company claimed to be taking climate mitigation actions in its annual report to the SEC. Meanwhile, DTE undermined the scientific consensus on climate change in its comments on the EPA Endangerment Finding. The company claimed that the science of the Endangerment Finding was "woefully incomplete" and its conclusions were "impenetrably vague." Moreover, DTE has affiliations with several anti-climate-science industry groups including the American Coalition for Clean Coal Electricity, the Center for Energy and Economic Development, and the National Association of Manufacturers (Dunlap and McCright 2011; see Appendix C).

Marathon CEO Clarence Cazalot urged his employees to oppose the Waxman-Markey climate legislation on the grounds that it "will be an enormous hidden tax on all Americans."

When companies such as those discussed above are inconsistent in their positions on climate science and policy, it is difficult for policy makers, shareholders, and the public to discern who is truly supporting climate science and science-based policy and who is blocking these efforts behind a climate-concerned public image. Scrutinizing companies' actions across many venues reveals a better picture of the role they play in the climate debate; such scrutiny also demonstrates a need for greater transparency (discussed in Chapter 4) in these actions.

FIGURE 10. Climate Actions for ConocoPhillips

Supporting Climate Science or Science-Based Policy

"ConocoPhillips recognizes that human activity . . . is contributing to increased concentrations of greenhouse gases in the atmosphere that can lead to adverse changes in global climate." (ConocoPhillips website, 2011)

Has Supported
Nature Conservancy

ACTION: ConocoPhillips' name and logo have been used in media campaigns advocating for cap-and-trade

ACTION: Expressed concern over the physical effects of climate change in 2009 earnings call with financial analysts

TRADE GROUP MEMBERSHIPS

- California Climate Action Registry
- Carbon Disclosure Project
- U.S. Climate Action Partnership (US CAP) (withdrew in 2010)
- World Business Council for Sustainable Development

Opposing Climate Science or Science-Based Policy

"While the EPA proposal includes support for the existence of climate change, the support for the effects of climate change on public health and welfare is limited and is typified by a high degree of uncertainty." (ConocoPhillips EPA Endangerment Finding comments, 2009)

ConocoPhillips

Relevant Spending

- Total political contributions: **$742,951**
- Total lobbying expenditures: **$62,710,000**
- Funding ratio of anti-climate to pro-climate members of Congress: **15.4 to 1**

ACTION: Withdrew from U.S. Climate Action Partnership on the eve of climate legislation's introduction in the Senate

ACTION: Set up an online campaign to encourage employees to contact senators to oppose legislation in spite of its active membership in the U.S. Climate Action Partnership

TRADE GROUP MEMBERSHIPS

- American Petroleum Institute*
- Business Roundtable
- National Association of Manufacturers
- National Petrochemical and Refiners Association
- U.S. Chamber of Commerce*
- Western States Petroleum Association

* BOARD MEMBER

ConocoPhillips was another energy sector company with many contradictory actions during the study period. References for figure information can be found in Appendix C.

FIGURE 11. Climate Actions for Caterpillar Inc.

Supporting Climate Science or Science-Based Policy

"Caterpillar does not shy away from playing its part in reducing GHG emissions. Caterpilar believes that well-conceived legislation is the best way for the U.S. to proceed to address economy wide GHG emission reductions. . . . An example of possible market-based approaches to GHG emission reductions is suggested by United States Climate Action Partnership." (Caterpillar EPA Endangerment Finding comments, 2009)

Has Supported

Brookings Institution

Nature Conservancy

World Resources Institute

ACTION: Joined the U.S. Climate Action Partnership in 2007 to push for cap-and-trade legislation

TRADE GROUP MEMBERSHIP

- Carbon Disclosure Project
- California Climate Registry
- EPA Climate Leaders
- U.S. Climate Action Partnership (US CAP) (withdrew in 2010)

Opposing Climate Science or Science-Based Policy

"I think we have to address climate change related issues in an international context, not just from a domestic lens only, and that's been our position with the US CAP initiative all along." (Jim Owens, CEO of Caterpillar, 2009)

Has Supported

Cato Institute

Heritage Foundation

ACTION: Withdrew from U.S. Climate Action Partnership on the eve of climate legislation's introduction in the Senate

TRADE GROUP MEMBERSHIPS

- U.S. Chamber of Commerce*
- National Association of Manufacturers*
- National Mining Association
- American Coalition for Clean Coal Electricity
- Alliance for Energy and Economic Growth
- Business Roundtable
- Center for Energy and Economic Development

* BOARD MEMBER

CATERPILLAR®

Relevant Spending

- Total political contributions: **$990,961**
- Total lobbying expenditures: **$16,380,000**
- Funding ratio of anti-climate to pro-climate members of Congress: **4.9 to 1**

Many companies outside the energy industry also engaged heavily on both sides of the climate conversation. Boeing Company, Caterpillar Inc., and General Electric Company, for example, were contradictory in their actions related to climate science and policy. References for figure information can be found in Appendix C.

FIGURE 12. Climate Actions for DTE Energy Company

Supporting Climate Science or Science-Based Policy

Has Supported

Nature Conservancy

ACTION: Indicated that it is taking climate mitigation actions in its business risk assessment for the U.S. Securities and Exchange Commission

ACTION: Recognized by the Carbon Disclosure Project for its professional practices on climate disclosure

TRADE GROUP MEMBERSHIPS

- Carbon Disclosure Project
- Business Environmental Leadership Council

Opposing Climate Science or Science-Based Policy

"[The EPA Endangerment Finding] ignores important scientific information that undermines EPA's presented conclusions regarding the negative and positive impacts of climate change, including the import of substantial uncertainties in the scientific record." (DTE EPA Endangerment Finding comments, 2009)

"In the absence of a dead-certain conclusion on the issue, we can expect the debate over the role of human activity on climate to continue." (DTE website, 2011)

ACTION: A 2009 shareholders' resolution noted DTE's contradictory actions and urged the company to "integrate its political spending and association memberships with its publicly stated, forward looking policy and positions on climate change"

TRADE GROUP MEMBERSHIPS

- American Coalition for Clean Coal Electricity
- Center for Energy and Economic Development
- National Association of Manufacturers*
- Alliance for Energy and Economic Growth

* BOARD MEMBER

DTE Energy®

Relevant Spending

- Total political contributions: **$874,678**
- Total lobbying expenditures: **$12,980,000**
- Funding ratio of anti-climate to pro-climate members of Congress: **1.2 to 1**

Several utility companies were also found to be contradictory in their actions. DTE Energy Company, a Detroit-based electricity and natural gas utility, was notable in that while it supports several trade groups that undermine climate science and policy proposals, DTE is recognized as an industry leader on climate action. References for figure information can be found in Appendix C.

CHAPTER 4

A Lack of Transparency

While this report examines many ways in which companies engage on climate change, the scope of its research has been limited by a lack of transparency in corporate affairs. Because publicly owned companies are legally required to disclose only minimal details regarding their financial and political activities, the information revealed here likely represents an incomplete picture of the overall influence these companies exert on the nation's climate science and policy discourse.

Furthermore, when the influences behind public policy making are concealed, which we have found to be the case with national discussions surrounding climate change, the democratic processes of our federal government are vulnerable to commercial and political exploitation. Casting light on corporate political activities can help hold companies accountable to investors, policy makers, and the public.

Support for Outside Organizations

Greater transparency is needed with respect to corporations' support of outside organizations. Although corporate foundations are legally required to disclose the recipient, amount, and purpose of each grant on their annual IRS Form 990, companies can circumvent this requirement by giving directly, rather than through their philanthropic arms, to outside groups (Kahn 1997). A recent study conducted by the Center on Philanthropy at Indiana University estimated that only 31 percent of all corporate donations are made through corporate foundations (Giving USA Foundation 2011).

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A lack of transparency in corporate donations to politically active groups allows companies to fund anti-science organizations without accountability.

When the influences behind public policy making are concealed, which we have found to be the case with national discussions surrounding climate change, the democratic processes of our federal government are vulnerable to commercial exploitation.

Inside the Heartland Institute

On February 14, 2012, several documents were published online that reportedly were internal files from the Heartland Institute, a free-market think tank that routinely spreads misinformation on climate science (Hickman 2012; Heartland Institute 2011; Hoggan and Littlemore 2009). The documents contained information on the organization's funding sources as well as its budgetary and strategic priorities. Though inappropriately obtained (Broder and Barringer 2012), the leaked documents, if authentic, shed light on the internal workings of a think tank that recently has been quiet about its funding sources.

A proposed 2012 budget document, for example, indicated that Heartland has and will continue to provide several thousand dollars per month to many academic scientists who have been "high-profile individuals who regularly and publicly counter the alarmist [anthropogenic global warming] message." The documents also outlined Heartland's plan to challenge the teaching of climate science in public schools; the plan included a module to teach high school students that "whether humans are changing the climate is a major scientific controversy."

The documents showed that Heartland's financial backing comes from anonymous donors, the fossil fuel industry—including Murray Energy Company and Marathon Oil Corporation—and other corporate interests such as the U.S. Chamber of Commerce, which has vocally opposed climate policy actions (U.S. Chamber of Commerce 2009).

The leaked documents underscore the need for greater transparency in corporations' funding of outside organizations. Shareholders and the public deserve to know how corporations are trying to influence public understanding of climate science, and this information should be available through stronger disclosure requirements rather than through unauthorized releases.

While many of the outside groups receiving corporate support represent trade interests or try to advance public-interest causes, some of these groups take starkly anti-science positions on climate change and work aggressively to challenge climate science and science-based climate policies.

The U.S. Chamber of Commerce alleged that the EPA "proposes a rule based entirely on untested scientific sources—mostly a U.N. report," and cited "profound and wide-ranging scientific uncertainties" as the basis of its opposition.

For example, two industry trade groups representing many of the companies in this study have actively fought against science-based climate policy. The National Association of Manufacturers (NAM), on whose board sit officers from 12 of the companies in our sample (Figure 4), strongly opposed the EPA's Endangerment Finding. The NAM questioned the science on which the finding was based and warned that regulating carbon emissions "will inevitably cripple the economy" (NAM 2009). In its comment on the EPA Endangerment Finding, the NAM implied that it was speaking on behalf of 11,000 member companies; however, because there is no public list of member companies, this claim is difficult to verify.

The U.S. Chamber of Commerce, which also refuses to publish a list of members (though it allegedly represents millions of businesses), criticized the EPA Endangerment Finding with even more vehemence. The Chamber alleged that the EPA "proposes a rule based entirely on untested scientific sources—mostly a U.N. report," and cited "profound and wide-ranging scientific uncertainties" as the basis of its

opposition (U.S. Chamber of Commerce 2009). As of this writing, the Chamber, along with the Coalition for Responsible Regulation, another industry group that does not disclose its member companies, is challenging the finding in court, claiming that the EPA has not fully considered the uncertainty associated with climate change impacts (McGowen 2012; Goldenberg 2010).

Congress and company shareholders alike have attempted to require companies to disclose their corporate giving. Several corporations, including General Electric Company, have received shareholder proposals requesting a list of charitable contributions (Tonello 2011). In 2009, shareholders of Waste Management, Inc. proposed greater disclosure of political contributions so that positions taken by supported groups—Waste Management has a seat on the board of the NAM, for example—would not run counter to the company's stated goal of corporate leadership on climate change. The resolution read, "Without disclosure, it is impossible for shareholders to know whether

The Influence of Private Corporations: Koch Industries

Although this report focuses on the influence of publicly traded companies, privately held corporations have played a larger role in the climate change denial campaign in recent years (Mann 2012). While the finances of publicly held companies are under some scrutiny from the government and shareholders, private companies are not subject to these outside pressures and thus can operate even less transparently.

Most prominent among the private funders of climate science misinformation are Koch Industries and its largest co-owners, Charles G. and David H. Koch. A conglomerate that encompasses manufacturing plants and refineries, venture capital, and consumer goods, Koch Industries is one of the largest private companies in the United States (Google Finance 2012). Through funding of political campaigns, ideological think tanks, political nonprofits, and large-scale lobbying efforts, Koch Industries and affiliated charities and foundations have systematically exerted enormous political influence on the climate dialogue at both the national and local scale.

Since 1997, the Koch Foundation has given more than $55 million to groups that misrepresent climate science or oppose climate policies, including the Heritage Foundation and several Koch-founded organizations: Americans for Prosperity, FreedomWorks, and the Cato Institute (Mann 2012; Greenpeace 2011). In political contributions, Koch Industries led the energy sector between 2006 and 2010 with a staggering $7.27 million contributed to political candidates (Greenpeace 2011). Koch Industries has also worked aggressively to delay

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and derail climate regulations at the state and regional levels. For example, it has made substantial financial contributions through its affiliates to the Yes on Prop 23 campaign (which opposed California's Global Warming Solutions Act). Koch Industries also contributed generously to a campaign, led by Americans for Prosperity, against the Regional Greenhouse Gas Initiative (RGGI), the market-based cap-and-trade system sponsored by 10 U.S. Northeast and Mid-Atlantic States (Greenpeace 2011).

Although a substantive amount of Koch Industries' involvement in the climate dialogue has been revealed, this is likely not the complete picture. Greater transparency in the political activity both of public and private corporations is needed so that politicians, shareholders, and the public may understand and hold accountable those who are influencing the national conversation on climate science and policy.

Waste Management payments to [the] NAM are used for the group's political activities, including those opposing climate change legislation" (IBT General Fund 2010).

Political Contributions and Lobbying

Companies in the United States are required to report some information on their corporate giving and political activity to the federal

TABLE 3. Selected Quotes from Members of Congress Who Have Misrepresented Climate Science

State	Name	Quote
NH-Sen (R)	Kelly Ayotte	"There is scientific evidence that demonstrates there is some impact from human activities. However, I don't think the evidence is conclusive." (McDermott 2010)
MN-Rep (R)	Michele Bachmann	"…the science indicates that human activity is not the cause of all this global warming. And that in fact, nature is the cause, with solar flares, etc." (Grandia 2009)
TX-Rep (R)	Joe Barton	"Global warming is 'unequivocal?' It's just flat out not true!" (Barton 2011)
MO-Sen (R)	Roy Blunt	"There isn't any real science to say we are altering the climate path of the earth." (Hair 2009)
OK-Sen (R)	Tom Coburn	"I am not the smartest man in the world, but I have been trained to read scientific documents, and [anthropogenic climate change] is malarkey." (Roberts 2009)
OK-Sen (R)	James Inhofe	"With all of the hysteria, all of the fear, all of the phony science, could it be that man-made global warming is the greatest hoax ever perpetrated on the American people? It sure sounds like it." (Inhofe 2003)
WI-Sen (R)	Ron Johnson	"I absolutely do not believe in the science of man-caused climate change. It's not proven by any stretch of the imagination." (Miller 2010)
IA-Rep (R)	Steve King	"It's not rational, it's a religion that we're up against . . . the presumption of the greenhouse effect is at least, from what I saw, was pretty convincingly rebutted." (Keyes 2010)
MN-Rep (D)	Collin Peterson	"They're saying to us [that climate change is] going to be a big problem because it's going to be warmer than it usually is; my farmers are going to say that's a good thing since they'll be able to grow more corn." (Power and Hughes 2009)
CA-Rep (R)	Dana Rohrabacher	"There is no consensus. Yet we are bombarded by radical environmentalists, and the media hype, with the common refrain 'case closed: global warming is real.'" (Rohrabacher 2009)
WI-Rep (R)	Jim Sensenbrenner	"I personally believe that the solar flares are more responsible for climatic cycles than anything human beings do." (Berliant 2009)
IL-Rep (R)	John Shimkus	"There is a theological debate that this is a carbon-starved planet—not too much carbon." (Mail Online 2010)
MI-Rep (R)	Fred Upton	"The principle argument for [delaying EPA's greenhouse gas regulation] is that it will allow Congress time to create its own plan for regulating carbon. This presumes that carbon is a problem in need of regulation. We are not convinced." (Phillips and Upton 2010)

In the period of heightened debates on climate policy during 2009 and 2010, some members of Congress made outlandish statements that spread misinformation about established climate science. W hile we cannot determine their motivations for such statements, these legislators received substantial funding from industries opposed to climate legislation that had been introduced (Andoni and Jaime 2011).

government; these requirements, however, are wholly insufficient to determine the full impact that corporations are having on federal policy related to climate change and other issues of public interest.

Specifically, publicly traded companies are required to report the amounts they spend on direct political contributions and lobbying, but they do not need to disclose the particular issues for which these amounts are targeted. In addition, companies do not need to disclose many indirect political contributions, such as their donations to outside organizations that are politically active. As a result, we cannot determine the extent to which corporations are lobbying politicians on climate policy.

Despite this ambiguity, there is evidence to suggest that some politicians feel compelled to boldly deny the science of climate change as a tactic for opposing science-based climate policies. Table 3 lists quotes from several members of Congress who have received funding from corporate interests. While we cannot directly link their views to companies' political contributions and lobbying efforts, it is clear that these politicians are moved to publicly undermine climate science in order to prevent or delay regulatory action on climate change.

In response to this lack of transparency on corporate political activity, the federal government and company shareholders have called in recent years for greater disclosure. In April 2010, President Obama proposed an executive order that would have required government contractors to disclose more details about their direct and indirect political spending, and Luis Aguilar, a commissioner of the U.S. Securities and Exchange Commission (SEC), recently echoed this sentiment. "Unfortunately," Aguilar said, "there is no comprehensive system of disclosure related to corporate political expenditures—and that failure results in investors being deprived of uniform, reliable, and consistent disclosure regarding the political expenditures of the companies they own"

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Senator James Inhofe (R-OK), who receives substantial funding from the fossil fuel industry, does not believe in climate change science and is a vocal opponent of climate action.

(Blumenthal 2012; Kennedy and Skaggs 2011). Moreover, a recent report found that nearly a third of the shareholder resolutions prepared for the 2012 corporate annual meeting season ask companies for more disclosure about their direct and indirect campaign spending and lobbying (Welsh and Passoff 2012).

> **"The days are long past when climate risk can be treated as a peripheral or hypothetical concern. Companies' financial condition increasingly depends upon their ability to avoid climate risk."**
>
> — Petition for Interpretive Guidance on Climate Risk Disclosure (SEC 2007)

Business Risks from Climate Change

Many companies are also not fully transparent regarding their disclosure of business risks associated with climate change.

The SEC obligates all publicly traded companies to discuss risks that might materially affect their business in their annual Form 10-K filings (SEC 2009). In 2010, the guidance for the Form 10-K specifically suggested that companies consider

The physical effects of climate change present a substantial risk to many American companies, especially those with facilities in the Gulf of Mexico, where offshore infrastructure is vulnerable to damage from more intense storms and sea level rise.

and discuss any significant risks to their business from climate change—both from its physical effects and from impacts of climate regulations (SEC 2010). The guidance also included a reference to scientific research on the physical effects of climate change and the risks to businesses (GAO 2007).

"Sure, addressing climate change involves risks and costs. But much greater is the risk of failing to act."

— Alcoa Inc. CEO Alain Belda (US CAP 2011)

Looking at the 2009 and 2010 Form 10-Ks for our sample companies, we find that some companies, such as Progress Energy, Inc. and AES Corporation, fully considered climate-related risks. For example, AES Corporation cited many climate change impacts, such as increased runoff, earlier spring peak discharge in glacier- and snow-fed rivers, the warming of lakes and rivers, a rise in sea level, variability in precipitation, and changes in the intensity and frequency of extreme weather events. The company then fully considered the business risks associated with each type of impact, including concerns that extreme weather events could "increase downtime and operation and maintenance costs" and that "changes in the temperature of lakes and rivers and changes in precipitation that result in drought could adversely affect the operations of [our] fossil-fuel fired electric power generation facilities" (SEC 2010).

In spite of the SEC guidance, however, two companies in our sample, General Electric Company and Boeing Company, failed to mention climate change at all in their 2009 and 2010 Form 10-Ks, and many others discussed only the impacts that regulation would have on their business—not

the physical effects of climate change itself (see Appendix B for further analysis of companies' SEC Form 10-Ks). Valero Energy Corporation, for example, considered how climate change regulation could affect the company's operations as well as the demand for its products and services. But it did not consider risks from the physical impacts of climate change, despite owning facilities on the Gulf of Mexico, a region especially vulnerable to climate change (Valero Energy Corporation 2011; U.S. Global Change Research Program 2009).

The failure of some companies to seriously consider climate change in their business risk assessments, even when specifically requested to do so in a government form, demonstrates a need for strengthening SEC requirements to ensure that companies are fulfilling their responsibilities to investors and the greater community.

Demands for Climate Risk Disclosure

In 2007, Andrew Cuomo, then attorney general of the state of New York, investigated five companies (Xcel Energy Inc., Peabody Energy Corporation, Dominion Resources Inc., Dynegy Inc., and AES Corporation) interested in building new coal-fired power plants (Confessore 2008). Cuomo pursued the case on the grounds that the proposed plants carried substantial business risk related to climate change, particularly from the possibility of legislation restricting carbon emissions, and that these risks had not been adequately disclosed, thereby misleading investors. Xcel Energy Inc. settled its part of the investigation in 2008 by agreeing to disclose business risks associated with climate change, including physical and legislative risks, in its annual reporting to the federal government, and to disclose more information about its carbon emissions (Confessore 2008).

This unprecedented case came during a time of broader demand on utility companies for greater consideration of climate change risk. Many other companies, including Sempra Energy, Ameren Corporation (Sheehan 2008), ConocoPhillips (Hays 2007), and Occidental Petroleum Corporation (Ceres 2010) were receiving shareholder proposals that specifically requested greater disclosure on the financial risks of climate change.

The Cuomo investigation and shareholder demands sent a strong message: climate change represents serious financial risks that publicly traded companies need to analyze and then disclose to their investors (Sheehan 2008). Shortly thereafter, the SEC issued guidance to companies for considering and discussing in their annual Form 10-K reports any significant business risks posed by climate change (SEC 2010).

Photo courtesy of NOAA

Many of the physical effects of climate change (including higher storm surge from stronger storms) impose significant costs for public health and welfare and the environment. Companies have a responsibility to their shareholders as well as the greater community to consider and prepare for climate-related risks.

CHAPTER 5

Conclusions and Recommendations

Photo courtesy of National Science Foundation

Our analysis of corporate activity reveals that while some American companies have taken laudable and consistent actions in support of climate science and policy, others have consistently and aggressively worked to undermine them. Notably, more than half the companies in our sample inject confusion into the climate conversation by taking contradictory actions in venues with different audiences. The widespread influence of a few of these latter corporations, and the resulting delay and defeat of policy efforts to address climate change, have huge implications for government, the economy, peoples' well-being, and the planet.

To address corporate interference and ultimately mitigate the impacts of climate change itself, the United States needs greater transparency in governmental and corporate affairs. This will not only help illuminate how extensively companies are influencing the political process but also will help hold them accountable for their actions. Ultimately, we seek a dialogue around climate science and policy that prioritizes peer-reviewed scientific information over the agendas of special-interest groups.

Corporate Influence Is Widespread

Corporations are devoting large amounts of funding and other resources both to facilitate

and obstruct political decision making related to climate change, and they are doing so across many different venues. Much of this misinformation about climate science is being put forward by some of our sample's energy-producing companies. These companies adversely affect the conversation on climate change through such means as direct public statements, political contributions, lobbying, congressional testimony, and the funding of trade groups and think tanks. Though these companies constitute a small subset of American corporations, they have a disproportionate effect on the dialogue—in part, by eroding the public's understanding of climate change and weakening its support for steps to address the climate crisis.

Contradictory Companies Create Confusion

A number of the companies considered in this report took different positions on climate science and policy within the same time period. These contradictory companies acted or made statements in support of climate science and policy in some public spaces while simultaneously spreading misinformation on climate science or hindering science-based policy in others. Most notably, our research suggests that such companies are more likely to express concern about climate change in those venues directed at the general public and more likely to misrepresent climate science in communications directed at the federal government and through their funding of outside organizations.

Lack of Transparency Harms the Public

While this report documents a wide range of actions that companies have taken, it is limited by the lack of transparency in corporate affairs. Because corporations are not legally required to publicly disclose many details relating to their political activities, the full extent of their influence on the national climate conversation is unknown. In addition to their political contributions and lobbying efforts, which companies are obligated to report only in vague detail, corporate donations to think tanks, industry trade groups, and other outside organizations further obscure companies' influence, as many of these groups also are not required to publicly disclose their funding sources.

As a result, companies are able to sow doubt about climate science and fund the spread of misinformation without being overtly affiliated with these practices. This lack of transparency prevents policy makers, investors, and the public from understanding who is helping and who is hindering progress toward an urgently needed national climate policy.

To address corporate interference and ultimately mitigate the impacts of climate change itself, the United States needs greater transparency in governmental and corporate affairs.

The Path Forward

When President Barack Obama took office, he vowed to "restore science to its rightful place." His administration has indeed taken several positive steps in this direction, many of which address the kinds of corporate interference we observe in the case of climate science and policy. In addition to publicly releasing White House visitor logs and strengthening ethics and conflict-of-interest policies, the Obama administration has issued guidelines directing all government agencies to develop and implement scientific integrity policies.

While some of the resulting policies are not as robust as they could be, many of them appear to significantly improve scientific integrity at federal agencies—though transparent implementation and evaluation of these initiatives will be essential to ensure they are serving their purposes effectively. In any case, it is fair to say that additional work remains in order to reduce inappropriate corporate interference in science and science-based policy surrounding climate change—and in other critical public health, security, and environmental issues.

Inappropriate corporate influence on the national dialogue on climate science and policy is large-scale and complex, spanning multiple venues from the public spheres of government relations and media outlets to the more covert realms of think tank funding and political contributions. In turn, the solutions for reducing this influence will also be large-scale and complex, requiring fundamental changes in how corporations and the federal government operate and interact. Transparency and accountability will need to be inherent to corporate-government relations, and the loopholes and mechanisms that allow corporations to inappropriately influence political processes will need to be eliminated.

A range of specific near-term actions can be taken by corporations, government, investors, and consumers that will put us on the right path. These recommendations would hold companies accountable for their statements and actions while laying the foundation for an honest conversation on science-based climate policy in the United States.

Specific Recommendations for Corporations

Although large public companies are under tremendous pressure to maximize short-term profits, there are ways in which they can play a responsible role in the political discourse on climate change without compromising shareholder interests.

- Corporate leaders should take responsibility for ensuring consistent company-wide positions that align with established climate science.
- Companies should integrate climate change into their business plans, which should reflect both the costs of protecting the public from climate change's physical impacts and the costs of complying with regulation.
- Companies that contract with the federal government should disclose memberships in trade groups and support for think tanks, as many of these organizations speak as proxies for their member or donor corporations when they lobby the government on climate issues.
- Companies should cease funding, and publicly withdraw from, those think tanks, trade groups, and other organizations that spread misinformation on climate science.
- Companies that are already behaving responsibly should encourage other companies to do likewise.

Specific Recommendations for the Legislative Branch

No branch of government has a more important role to play than Congress in creating federal climate policy that is strongly based on climate science. Congress should use its authority to ensure that legislators and the public are being responsibly served and informed.

- Congress should approve the Democracy Is Strengthened by Casting Light On Spending in Elections (DISCLOSE) Act, or similar legislation, to enhance disclosure of indirect political contributions.
- The Lobbying Disclosure Act should be strengthened and enforced. Although companies are currently required to report their lobbying expenditures, the content of these reports is often vague and incomplete. A more robust policy, including mechanisms for monitoring and enforcement, is needed to inform the public on corporate lobbying activities.
- Congress should investigate discrepancies between climate positions presented by

Photo courtesy of the House Select Committee on Energy Independence and Global Warming

Despite shareholder pressures, companies can play a role in fostering responsible political discourse on climate change and other public interest issues.

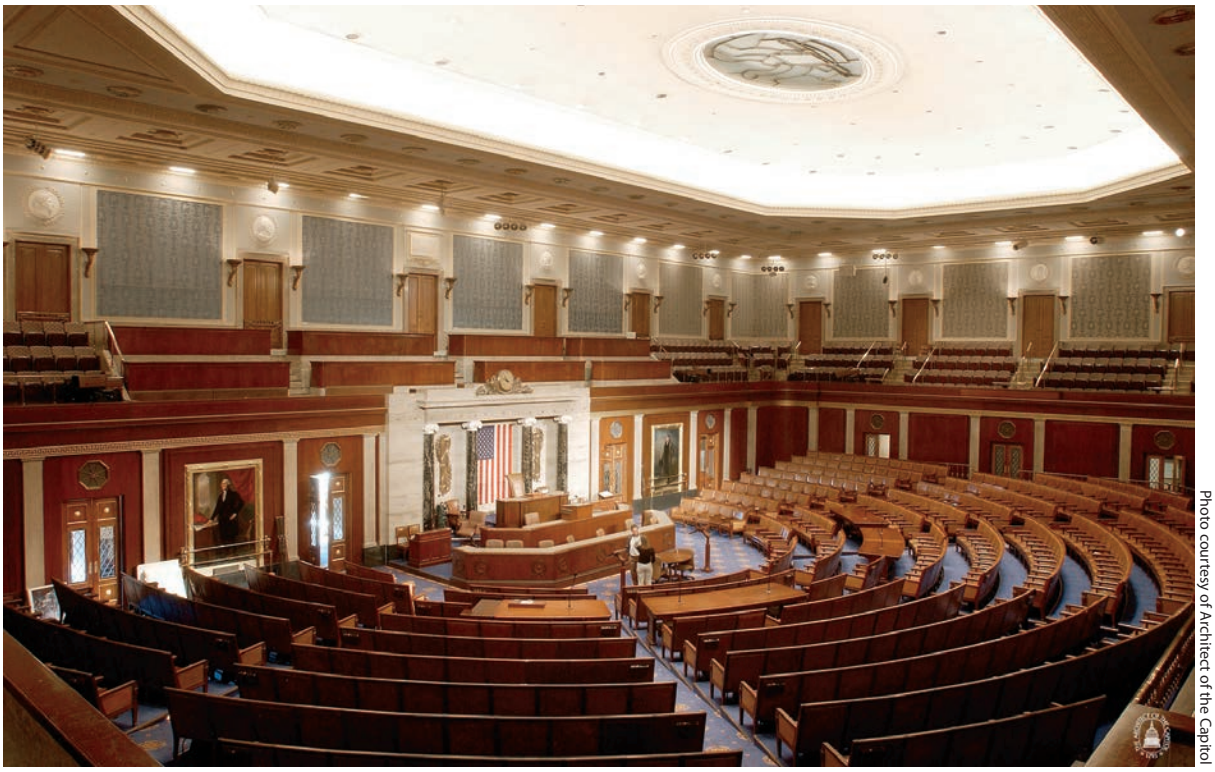


Photo courtesy of Architect of the Capitol

Congress should use its authority to require greater transparency in the political activity of corporations and the organizations that represent them.

companies in congressional oversight hearings and those they have presented elsewhere. Congress should hold companies accountable for their inconsistent statements.

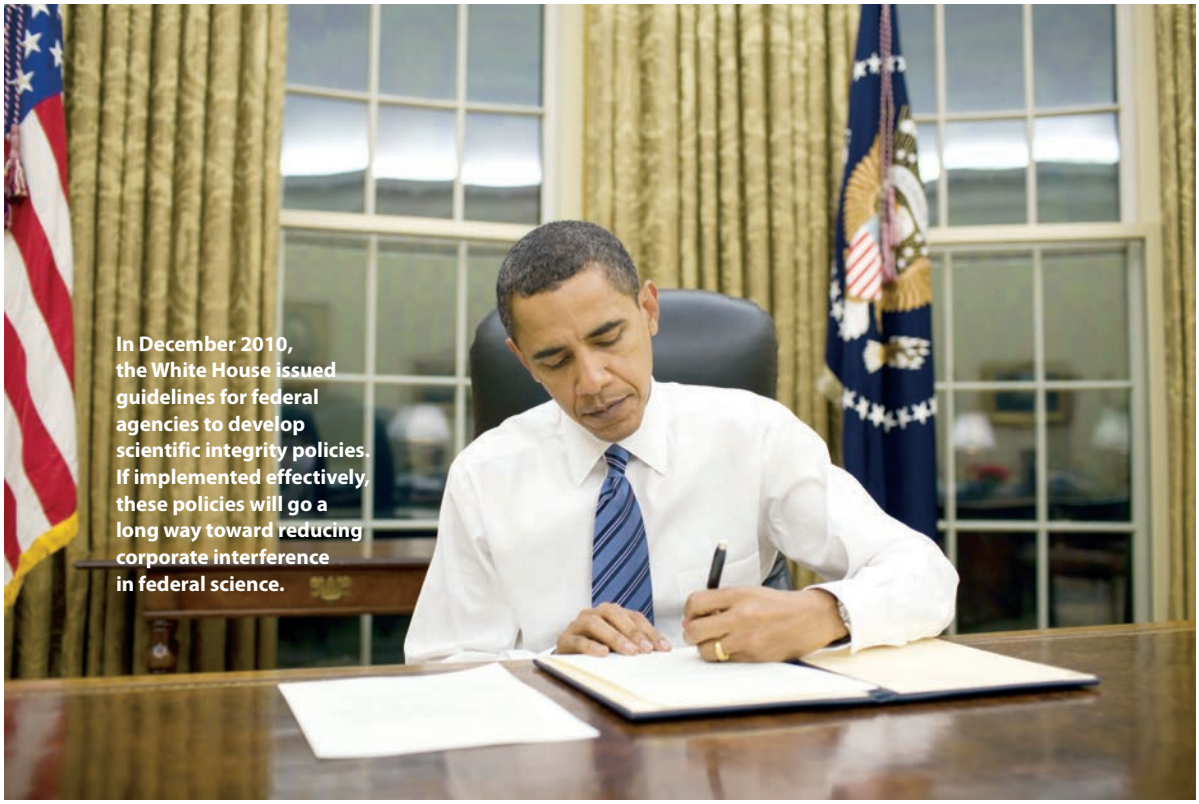
Specific Recommendations for the Executive Branch

The federal government plays an important public-protection role in regulating and overseeing the corporate sector. The executive branch in particular must use its authority to ensure that companies are behaving responsibly in, and not unfairly influencing, the public discussion.

- The president should issue an executive order, first proposed in April 2011, that would require companies with government contracts to disclose their political contributions. Because these companies stand to benefit directly from public spending, taxpayers have a right to know who and what they are supporting.
- The Securities and Exchange Commission should require publicly traded companies to disclose their political spending to their shareholders. Responding to shareholder requests for such information, Commissioner Luis Aguilar has called for the SEC's adoption of this requirement.
- Using the responses to its climate-related guidance to companies on filing the annual Form 10-K, the SEC should actively monitor companies' disclosure of material risks from the physical impacts of climate change and report this information to Congress. Further, the SEC should require companies to report annually whether climate change poses risks to their business and to list any such risks specifically.
- Federal agencies should fully implement, and evaluate the effectiveness of, their scientific integrity policies developed in response to the White House's guidelines issued December 17, 2010.

Specific Recommendations for Investors and Consumers

Investors and consumers also have a responsibility to hold companies accountable for their actions and statements.



In December 2010, the White House issued guidelines for federal agencies to develop scientific integrity policies. If implemented effectively, these policies will go a long way toward reducing corporate interference in federal science.

Photo courtesy of the White House

The loopholes and mechanisms that allow corporations to inappropriately influence political processes need to be eliminated.

- Investors and consumers should continue to work both individually and collectively to advance transparency, accountability, and integrity in the private sector.
- Investors and consumers should hold companies accountable for inconsistencies in their actions and for positions that conflict with established climate science.
- Investors and consumers should contact companies directly and ask about their support for think tanks, what their climate plans entail, and how they are lobbying Congress.
- Investors should press companies to seriously consider any business risks posed by climate change, and to document them in their SEC Form 10-K, as part of companies' responsibility to investors and the greater community.

Specific Recommendations for the Media

Although the role of the mainstream media was not the focus of this report, we recognize that they are a major source of information for policy makers and the public. Thus the media have an obligation to ensure that the scientific consensus around climate change is accurately reported and that scientifically false information is not promulgated.

- The media should be mindful of potential conflicts of interest among the experts and other individuals they rely on for information, and the media should disclose such conflicts when found.
- The media should fact-check statements made by corporations and those affiliated with them, just as they already do with statements made by politicians.
- The media can help hold companies accountable for their actions and statements by reporting contradictory corporate behavior.

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APPENDIX A

Methodology and Scope of Report

To obtain a manageable study scope, we scrutinized a sample of 28 companies, selected because they chose to engage in at least one of two ways:

1. They commented publicly on the Environmental Protection Agency's *Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act* ("EPA Endangerment Finding") (EPA 2009)
   OR
2. They contributed to either the pro- or anti-Proposition 23 campaigns during the 2010 California election. "Prop 23," if approved, would have suspended "implementation of air pollution control law (AB 32) requiring major sources of emissions to report and reduce greenhouse emissions that cause global warming, until unemployment drops to 5.5 percent or less for [a] full year" (California Secretary of State 2010)

Both of these venues were important national, and public, climate discussions in 2009 and 2010.

The EPA Endangerment Finding was a legally mandated and formal determination, made in draft form in April 2009 after a two-year scientific review, that carbon dioxide and five other heat-trapping gases are pollutants that threaten public health and welfare. Since the Clean Air Act mandates that the EPA regulate such pollutants, the Endangerment Finding set the EPA on a course (particularly in the absence of any other federal-level policy) to implement the only federal carbon-regulation policy in the United States.

After the draft Endangerment Finding was announced, the EPA accepted public comments for 60 days before making a final determination in December 2009. Submitted comments have been posted on *www.regulations.gov*, under the docket EPA-HQ OAR-2010-0171. Among more than 380,000 total submissions were comments submitted by 23 members of the S&P 500 (major and publicly traded U.S. companies), either directly or through trade groups and coalitions of which the companies were prominent members.

Prop 23, the other public venue in which corporate participation served as a criterion for this study's company selection process, was an attempt to prevent implementation of a pollution control law (AB 32), previously passed by California's legislature, that required companies to report their global warming emissions and begin to reduce them. Fourteen S&P 500 companies contributed money either to support or oppose Prop 23. Many of these companies also commented publicly on the EPA Endangerment Finding.

Among the 23 companies commenting on the EPA docket (directly or as prominent members of coalitions) and the 14 companies contributing to campaigns for or against Prop 23, we identified a total of 28 S&P 500 companies that had chosen to take a public stance on climate issues. To ensure that companies we selected were not passively participating, only those that had commented or donated independently in their own name at least once, or had done so as a member of a coalition at least twice, were included.

As can be seen in Table A1, the 28 companies came from six different stock market sectors: Energy, Utilities, Industrials, Information Technology, Consumer Discretionary, and Materials. The majority of the companies (24) came from the first three of these sectors.

The size of the companies in our sample, as expressed by their market capitalization (calculated by multiplying share price by the number of shares outstanding), ranged from just over $3 billion to more than $400 billion (YCharts 2009–2011). The largest, Exxon Mobil Corporation at $414 billion, was more than twice as large as the next largest, General Electric Company at $197 billion. The median market capitalization was $16 billion. About a third of the companies had a market capitalization of less than $10 billion. The smallest, Tesoro Corporation, weighed in at $3.41 billion.

The majority of companies analyzed for this report (17) were large corporations with market capitalizations valued between $10 billion and $100 billion (Figure A, p. 50). Nearly one-third (eight) were mid-cap, valued between $1 billion and $10 billion. Three companies were in the mega-cap category, valued at over $100 billion.

Most sample companies came from the Energy and Utilities sectors, with more than one-third of the companies in each of these two sectors. Four companies came from Industrials, two from Materials, and one each from Information Technology and Consumer Discretionary.

Sources of Evidence

Our research was focused on the years 2008 to 2010, when climate legislation in the United States was most prominent in national discussions; however, to get a broader picture of corporate engagement, some areas of scrutiny drew from longer time periods, ranging from 2002 at the earliest. The venues of company engagement scrutinized and the methodology and time periods studied for each venue are outlined below.

Corporate Public Relations

We conducted Google keyword searches of climate terms such as "climate," "global warming," "emissions," "greenhouse gas," "GHG," "CO_2," "carbon dioxide," "energy efficiency," and "cap and trade" within relevant company materials. We conducted these searches wherever companies might voluntarily but officially discuss and

TABLE A1. Company Selection Criteria

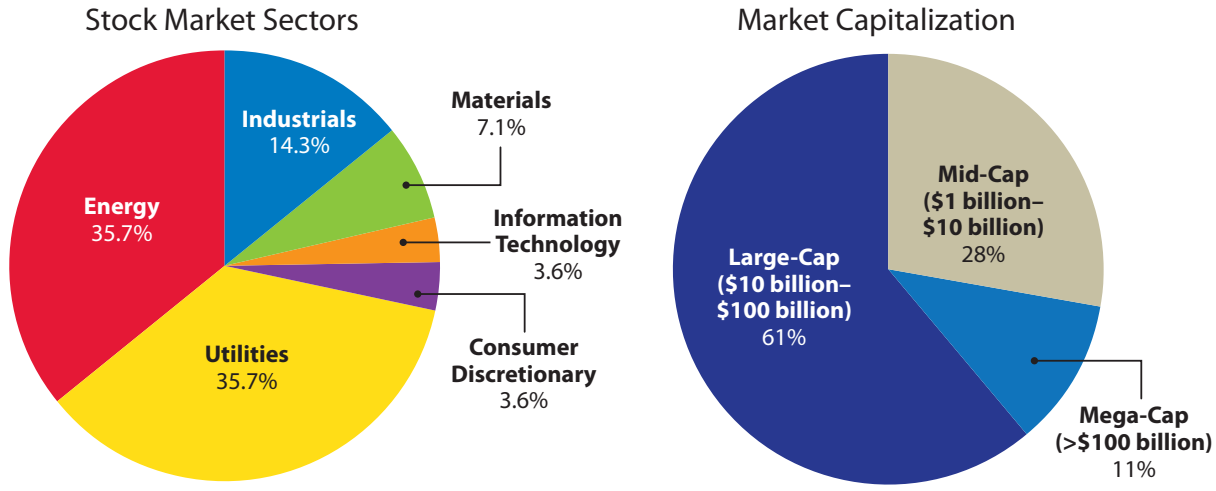
Company	Participated in EPA Endangerment Finding	Participated in California Prop. 23
Chesapeake Energy Corporation	✔	
ConocoPhillips	✔	
Denbury Resources Inc.	✔	
Exxon Mobil Corporation	✔	
Marathon Oil Corporation	✔	✔
Murphy Oil Corporation	✔	
Occidental Petroleum Corporation	✔	✔
Peabody Energy Corporation	✔	
Tesoro Corporation		✔
Valero Energy Corporation	✔	✔
Ameren Corporation	✔	✔
AES Corporation		✔
DTE Energy Company	✔	✔
FirstEnergy Corporation	✔	
NRG Energy, Inc.	✔	
NextEra Energy, Inc.		✔
Progress Energy, Inc.	✔	
Sempra Energy		✔
TECO Energy, Inc.	✔	
Xcel Energy Inc.	✔	
Boeing Company	✔	
Caterpillar Inc.	✔	✔
General Electric Company	✔	✔
Waste Management, Inc.	✔	
Alcoa Inc.	✔	
FMC Corporation	✔	
Applied Materials, Inc.		✔
NIKE, Inc.	✔	✔

Color Key by Stock Market Sector:

Energy · Utilities · Industrials · Materials · Consumer Discretionary · Information Technology

Twenty-eight publicly traded American companies participated in the public discussion surrounding the EPA's Endangerment Finding, California's Proposition 23, or both.

FIGURE A. Market Capitalization and Stock Market Sector of Sample Companies



Market capitalization and stock market sectors of our sample companies (YCharts 2011). Market capitalization is a measurement of the size of a corporation and is equal to the share price times the number of shares outstanding (i.e., shares that have been authorized, issued, and purchased by investors) of a publicly traded company.

communicate to the public about climate issues, including companies' websites, annual reports, corporate social responsibility or environmental reports, press releases, and other company publications. We also conducted general Internet searches that paired specific company names with the above climate-related search terms.

Executives' Statements

We conducted additional climate keyword searches, using the same terms as above and adding the names of top executives of our sample companies, to identify speeches or other public statements these officers might have made about climate-related issues. Some of these communications were archived on companies' websites, while others were quoted in news stories or other secondary sources.

Earnings Calls with Financial Analysts

Earnings calls are discussions of a company's financial results that are usually conducted quarterly as conference calls between financial analysts and one or two company executives. We chose to scrutinize earnings calls, as they are a venue where executives sometimes discuss perceptions of how climate, or climate regulation, has affected or will affect financial performance. To identify climate discussions within earnings calls, we conducted climate keyword searches on transcripts of earnings calls for each of our sample companies during the second, third, and fourth quarters of 2009—a time when climate legislation was under active consideration in Congress. The transcripts of quarterly earnings calls were accessed through *Seekingalpha.com*.

EPA Endangerment Finding Comments

Public comments made by companies and their employees on the EPA Endangerment Finding served as a selection criterion for our sample. Utilizing the comment postings found at *Regulations.gov*, we reviewed and analyzed each comment for discussion related to climate issues, and we categorized the types of arguments made.

Securities and Exchange Commission Form 10-K Filings

Companies are legally mandated to submit filings with the federal Securities and Exchange Commission (SEC), in particular a Form 10-K, to discuss risks that might materially affect their business (SEC 2009). All publicly traded companies must file these forms annually. Guidance

issued in 2010 by the SEC specifically detailed the ways in which companies should consider climate change risk in their Form 10-K (SEC 2010). In order to analyze each company's 2009 and 2010 SEC Form 10-K filings for indications about the companies' climate positions, we electronically accessed the filings from the SEC's EDGAR database and then conducted additional climate keyword searches using the same terms as outlined under the Corporate Public Relations subsection above. Then we analyzed how each company was considering climate risk for the SEC and for its investors, including the extent to which each company considered the impacts of climate regulations on its business and also the physical impacts of climate change itself.

Internal Revenue Service Form 990 Filings

To determine which organizations were receiving funding from the companies in our sample, we looked at the annual reports posted on company websites and also at reports of the foundational arms of corporations filed with the Internal Revenue Service on Form 990. From these reports, we documented any reporting of donations to outside groups. In addition, we looked at the most recent and available Form 990c from these groups to see if the organizations themselves reported receiving funding from our companies. We examined the two most recent annual Form 990s for corporate foundations. For most companies, 2009 and 2010 Form 990s were scrutinized; however, for two companies (FMC Corporation and Occidental Petroleum Corporation), the most recent Form 990 available was from 2005; hence older Form 990s were assessed for these companies.

Political Contributions

We analyzed donations that our sample companies made to members of Congress with respect to their votes related to climate change. Working with the League of Conservation Voters, we identified a series of congressional votes as having a "pro-climate-science" side and an "anti-climate-science" side, and we scored members of Congress accordingly on the basis of their votes. In the Senate, we looked at five votes since 2003, and in the House, five votes since 2007. (See Appendix D for a summary of the climate-related votes included in this analysis.) Each "pro" vote was given a score of +1 and each "anti" vote a score of -1. Those members of Congress with scores of three or more were considered pro-climate and those with scores of negative three or below were considered anti-climate. The result was 237 pro-climate members and 198 anti-climate members. Many members fell between the thresholds, either because they voted pro in some cases and anti in others or because their voting record on climate-related measures was not sufficient to categorize them. As a result, members of Congress who did not meet our pro and anti thresholds were omitted from our company political contribution totals.

We worked with the Center for Responsive Politics (CRP) to examine campaign donations from our sample companies to members of Congress in each (pro or anti) category during the time frame of the relevant votes: 2007 to 2010 for the House, 2003 to 2010 for the Senate (Andoni and Jaime 2011). The CRP utilizes information from the Federal Election Commission, Internal Revenue Service, and Senate Office of Public Records to track campaign contributions.

Lobbying Expenditures

In cooperation with the CRP, we scrutinized lobbying expenditures for each of our sample companies in 2010 and noted the issue areas on which companies reported lobbying. In addition, we analyzed lobbying over time, tracking annual lobbying expenditures for each company from 2002 through 2010.

Congressional Testimony

Company executives have testified under oath at a number of congressional hearings on climate and related issues. We accessed official congressional transcripts (U.S. Government Printing Office 2012) featuring witnesses from any of the companies in our sample, and we then searched for the climate keyword terms identified above in the Corporate Public Relations section. We found

testimony from executives of 17 of the 28 companies in our sample, who testified in 25 hearings between 2000 and 2010.

Industry Group Memberships

We looked at companies' membership in or affiliation with industry groups that take positions on climate issues and with climate action groups (dedicated to addressing climate change through corporate action). Our list included 21 industry or climate action groups. An industry group or climate action group was included on our list if 1) more than two companies of our 28-company sample were members and 2) the group had a position on climate change during the study period that could be interpreted as either a) supporting climate science and legislation or b) misrepresenting climate science or inhibiting legislation. (See section below, Characterization of Misinformation about Climate Science, for the methodology we used to designate organizations as misrepresenting climate science.) For industry groups, we also considered whether the group had submitted a comment on the EPA's Endangerment Finding or participated in the Yes on Prop 23 campaign or No on Prop 23 campaign in California during 2010 (Ballotpedia 2012).

Many industry groups, including some large ones such as the U.S. Chamber of Commerce, do not publish their membership list; thus in order to identify company affiliations we looked at their boards of directors for executives from our sample companies, and we also considered research compiled by the Center for Media and Democracy and U.S. Chamber Watch (Center for Media and Democracy 2011; ChamberWatch 2011). Climate action groups do tend to publicize their corporate membership, as companies like to make their participation known, so this information appeared on organization and corporate websites.

Think Tanks and Other Outside Organizations

To identify nonprofit, nongovernmental, public policy organizations that work on climate change issues and that were supported by our study's 28 companies during 2009 and 2010, we utilized annual IRS Form 990 filings, company annual reports, and other primary sources that could verify company support for an organization. To choose the more prominent organizations that were publicly active on climate issues, we utilized several resources. We looked at the number of times these organizations were mentioned in Nexis (news media) in the context of climate change between January 2008 and May 2011, as a proxy for public impact. We also utilized the list of the 50 most influential think tanks in the United States and the list of the 30 most influential environmental groups, both of which were compiled by the University of Pennsylvania's 2011 Global Go To Think Tanks Report (McGann 2012). Finally, we considered the organizations included on the International Center for Climate Governance's Think Tank Map, which identifies the most active think tanks on climate change issues (International Center for Climate Governance 2012). From these sources, we identified organizations that were active in climate science and policy issues in the United States and that had received support from at least one of the companies in our study. Organizations were categorized as supporting or misrepresenting climate science in their work based on organization material. (See section below, Characterization of Misinformation about Climate Science, for the methodology we used to designate organizations as misrepresenting climate science.)

Interviews

After conducting our research, we invited company executives to respond to questions and discuss in interviews their climate positions. We hired an independent professional interviewer and drafted a set of standard questions (see Appendix E). We sent letters to executives and public affairs representatives at each of our sample companies, introducing our project and asking if they would be willing to share their thoughts regarding their company's positions on issues surrounding climate change. Most companies in our sample declined or did not respond to our invitation, but six companies (ConocoPhillips, Denbury Resources Inc., Exxon Mobil Corporation,

NRG Energy, Inc., TECO Energy, Inc., and Waste Management, Inc.) did accept our interview request; we interviewed executives at each of those companies in the summer of 2011.

Additional Information

As background and for additional data, we looked at several other sources of information about companies' engagement with climate issues. For instance, we tracked shareholder actions from 2006 to 2010—in particular, when some shareholders introduced resolutions calling for companies to increase disclosure of climate-related information, and when other shareholders called for companies to stop or reduce investment in carbon mitigation activities. We also reviewed advertising in print media (newspapers and magazines) related to climate change, focusing on late 2009, when climate legislation had passed the U.S. House and was pending in the Senate.

Characterization of Misinformation about Climate Science

In this report, we take a special look at the specific venues where companies misrepresented climate science (Figure 8). When policy makers debate potential responses to climate change, companies of course have the right to weigh in on the consequences, economic and otherwise, that different policy options may have on their operations. However, it is inappropriate for them to spread misinformation about the science that informs the discussion. For this reason, we focus on companies that have taken actions that specifically serve to spread misinformation about established climate science.

To identify companies, think tanks, and other organizations that misrepresented climate science in their statements or actions, we examined materials associated with their names and looked for statements therein about climate change that misrepresented the scientific consensus on climate change. These misrepresentations included any of the following (adapted from Brown 2012):

- Emphasizing the unknowns about how human actions may affect the climate system while ignoring what is known
- Repeating untruthful claims about climate change science
- Manufacturing bogus scientific claims by such strategies as organizing dubious scientific conferences and paying for scientists to produce criticisms of mainstream climate science
- Widely publishing climate-science claims that have not been subjected to peer review

Companies and outside organizations with statements affiliated with their name that had any of the above four characteristics were considered, for the purposes of this report, to be misrepresenting climate science.

Scoring and Categorization of Companies in Figure 7

Drawing from the full scope of corporate engagements scrutinized in this study, we identified company statements and actions that were either in support of or in opposition to climate science and policy, making a distinction between corporate communication statements and corporate actions (which included conversations with the federal government, endorsement of or opposition to science-based climate policies, and corporate funding of think tanks and other outside organizations). This process allowed us to compare the statements that companies directed at the general public, such as on their websites and in media statements, with the actions they took that were directed at policy makers and other outside groups. Company statements and actions were considered "pro-climate" if they aligned with climate science or supported the implementation of science-based climate policies; statements and actions were identified as "anti-climate" if they conflicted with the scientific consensus on climate change or otherwise inhibited progress toward climate policy actions. Table A2 (p. 54) lists the statements and actions for which companies received a "+1" or a "-1" for their statements (Corporate Public Relations) score or their actions (Corporate Actions) score.

TABLE A2. Figure 7 Scoring Key

	Supporting Climate Science and Legislation +1	Opposing Climate Science and Legislation -1
Corporate Public Relations	Acknowledges the scientific consensus on climate change OR expresses concern about the impacts of climate change	Misrepresents climate science
	Expresses commitment to taking voluntary mitigation actions	Does not express commitment to voluntary mitigation actions
Corporate Actions	Endorses specific climate change legislation or EPA action in EPA Endangerment Finding comments or SEC Form 10-K	Misrepresents climate science in EPA Endangerment Finding comments or SEC Form 10-K
	Endorses specific climate change legislation in venue other than EPA Endangerment Finding comments	Opposes specific climate change legislation in venue other than EPA Endangerment Finding comments
	Donates to the No on Prop. 23 campaign in California, 2010	Donates to the Yes on Prop. 23 campaign in California, 2010
	Funds think tanks or groups that support climate science or legislation	Funds think tanks or groups that undermine climate science or oppose legislation
	Contributes to "pro-climate" members of Congress by over 2:1 ratio	Contributes to "anti-climate" members of Congress by over 2:1 ratio

To further underscore the cumulative impact that each of our companies had on the climate conversation, we overlaid three broad categories of company behavior: Consistent, Contradictory, and Obstructionist. Since all companies had at least some positive public relations statements, we analyzed their corporate actions to differentiate them. Companies with only positive actions, aligning with their positive public relations statements, were categorized as Consistent.

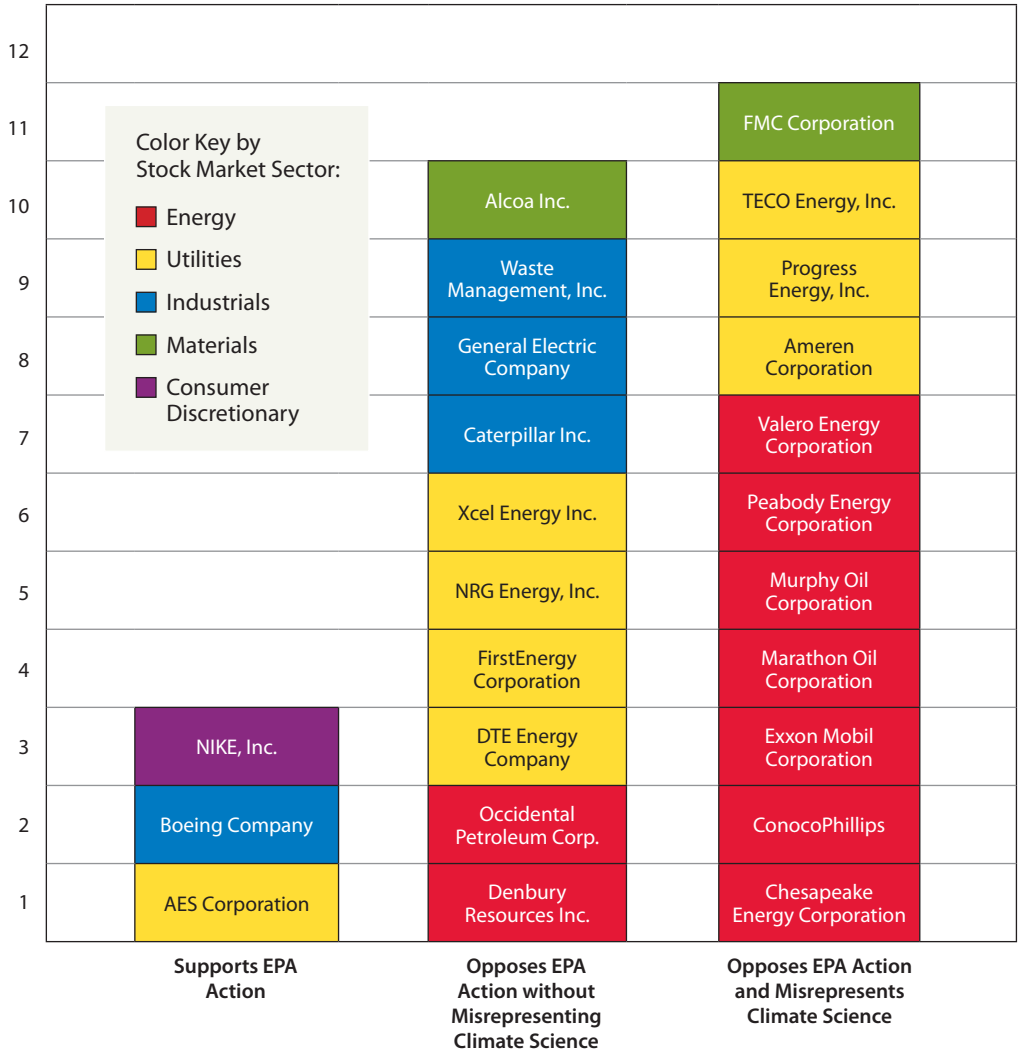
Companies with a substantial number of negative actions (at least two) and no positive actions were categorized as Obstructionist. Companies with both positive and negative actions or with only an insubstantial number (no more than one) of negative actions were categorized as Contradictory. An insufficient number of statements and actions were found for FirstEnergy Corporation and Xcel Energy Inc. to be categorized based on this metric.

APPENDIX B

Supplemental Results by Venue

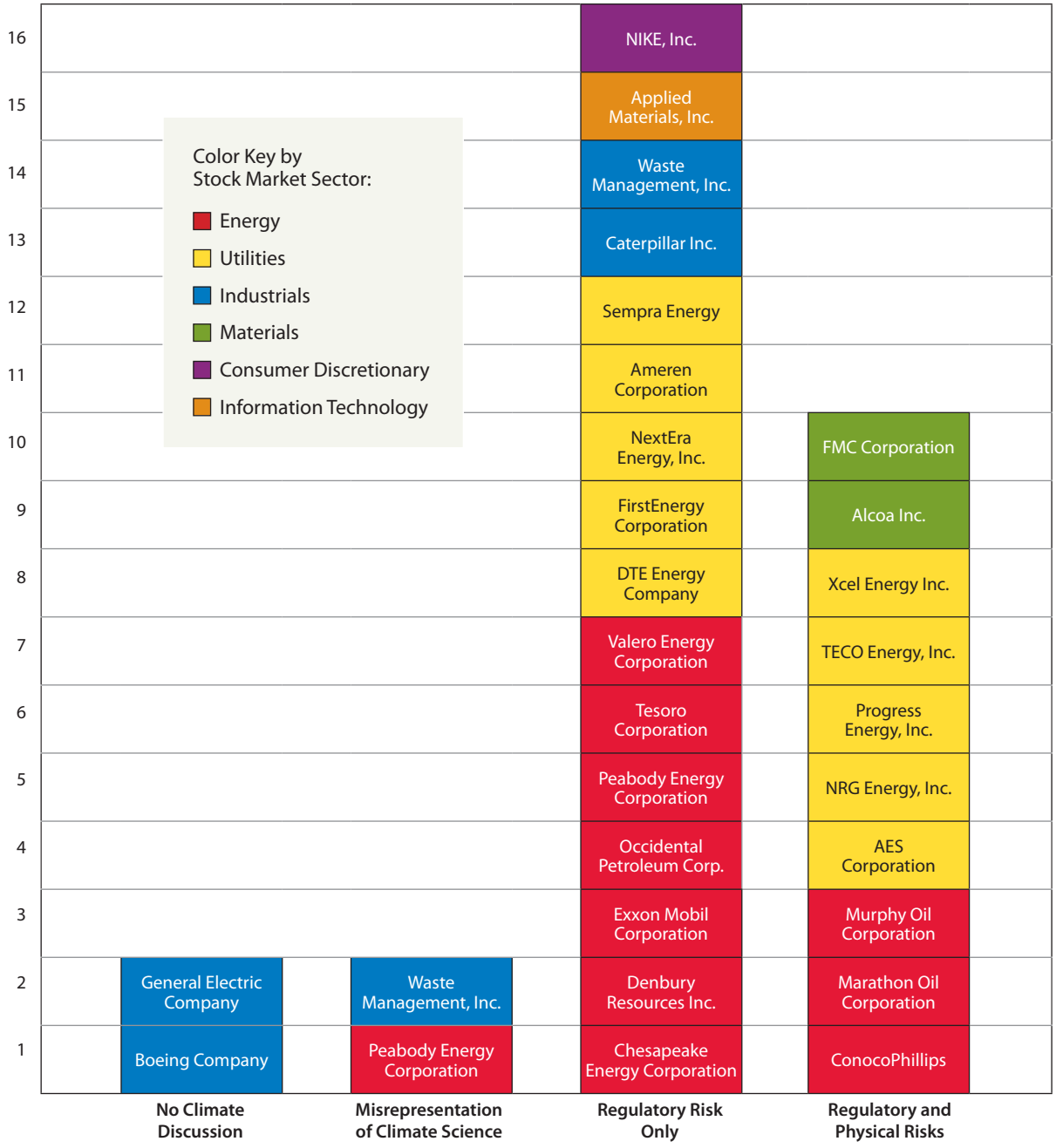
Here we present additional research results pertaining to four venues for company engagement—EPA Endangerment Finding comments, SEC Form 10-K filings, earnings calls, and executive interviews. For research results arranged by company, please see the company profiles in Appendix C.

FIGURE B1. EPA Endangerment Finding Comments



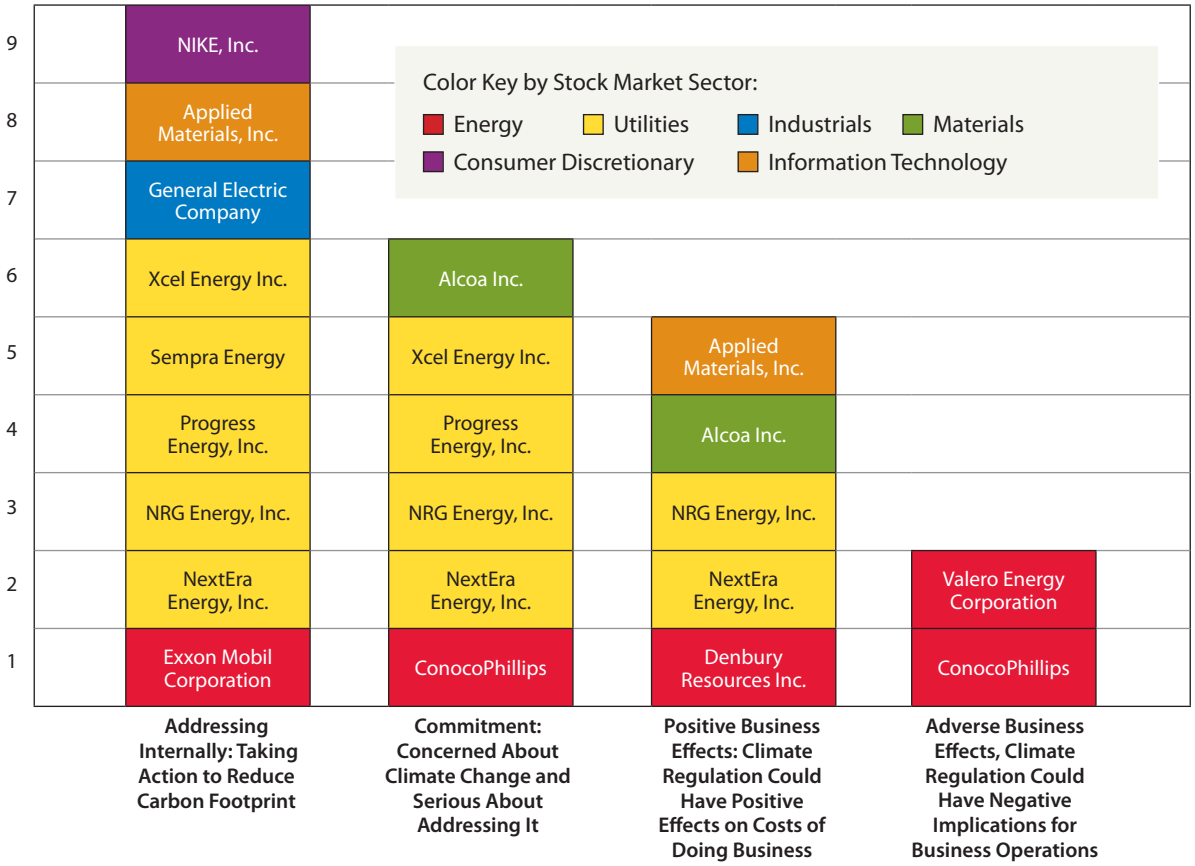
Of our sample of 28 companies, 24 submitted comments on the EPA Endangerment Finding either individually or as members of trade groups or coalitions. The vast majority of companies in our sample (21 of 24) opposed using the Clean Air Act as a means of regulating carbon dioxide emissions, and two of the three remaining companies offered qualified support, indicating that they would find EPA action acceptable only as a backup option should congressional proposals fail.

FIGURE B2. Discussion of Climate Risks in Securities and Exchange Commission Form 10-K Filings in 2009 and 2010



Companies discussed climate risk in their SEC Form 10-K in different ways. Two companies did not consider climate risk at all and two misrepresented climate science in their discussion of risk associated with climate regulations. Of the companies that discussed climate risk without misrepresenting the science (last two columns), they all discussed business risks associated with climate-related regulations; some companies also discussed business risks associated with the physical impacts of climate change.

FIGURE B3. Climate-Related Comments in Earnings Calls in the Second, Third, and Fourth Quarters of 2009



In their earnings calls with financial analysts during three of the 2009 quarters, about half of the companies mentioned climate change and none of them misrepresented climate science in these discussions.

TABLE B. Interviews with Executives

Company	Interview Request Outcome
Chesapeake Energy Corporation	No response
ConocoPhillips	Interview with head of sustainable development
Denbury Resources Inc.	Interview with president and chief operating officer
Exxon Mobil Corporation	Interview with climate policy manager
Marathon Oil Corporation	Declined
Murphy Oil Corporation	Agreed to interview, then backed out
Occidental Petroleum Corporation	Declined
Peabody Energy Corporation	Declined
Tesoro Corporation	Declined
Valero Energy Corporation	Declined
Ameren Corporation	Declined
AES Corporation	No response
DTE Energy Company	Declined
FirstEnergy Corporation	Declined
NRG Energy, Inc.	Interview with the senior vice president of sustainability, policy, and strategy
NextEra Energy, Inc.	No response
Progress Energy, Inc.	Declined
Sempra Energy	Agreed, then backed out
TECO Energy, Inc.	Interview with manager of air program in the environmental health & safety department
Xcel Energy Inc.	No response
Boeing Company	Declined
Caterpillar Inc.	Declined
General Electric Company	Declined
Waste Management, Inc.	Interview with director of federal public affairs and director of greenhouse gas program
Alcoa Inc.	Declined
FMC Corporation	Agreed, but failed to schedule
Applied Materials, Inc.	No response
NIKE, Inc.	Declined

Color Key by Stock Market Sector:

Energy · Utilities · Industrials · Materials · Consumer Discretionary · Information Technology

We invited companies to discuss their climate positions with us by means of interviews with executives. Most companies in our sample declined or did not respond to our invitation, but six companies (ConocoPhillips, Denbury Resources Inc., Exxon Mobil Corporation, NRG Energy, Inc., TECO Energy, Inc., and Waste Management, Inc.) accepted our interview request, and we interviewed executives at each of those firms in the summer of 2011. ConocoPhillips asked not to be quoted, but transcripts of the interviews conducted with the other five companies are available in Appendix E.

APPENDIX C

Company Profiles

Appendix C is available on the Union of Concerned Scientists website at *http://www.ucsusa.org/corporateclimate.*

APPENDIX D

Summary of Key Climate-related Votes in Congress

Appendix D is available on the Union of Concerned Scientists website at *http://www.ucsusa.org/corporateclimate.*

APPENDIX E

Corporate Interview Questions and Transcripts

Appendix E is available on the Union of Concerned Scientists website at *http://www.ucsusa.org/corporateclimate.*

A Climate of Corporate Control

How Corporations Have Influenced the U.S. Dialogue on Climate Science and Policy

In recent years, corporations and their agents have played an increasing role in the national conversation on climate change, with companies weighing in not only on policy debates but also participating in discussions of climate science. To better understand this growing corporate influence, we analyzed the actions of the most highly engaged companies.

Our analysis of corporate activity around climate change reveals that while some American companies have taken laudable and consistent actions in support of climate science and policy, others have consistently and aggressively worked to undermine them.

Some companies, as shown in this study, have created confusion in the conversation on climate change by taking contradictory actions across different venues. Even while cultivating a climate-concerned image in more public settings, these corporations have sown doubt about climate science both directly (such as by challenging climate science in government filings) and indirectly (e.g., by supporting politicians, trade groups, and think tanks that misrepresent the scientific consensus on climate change and oppose action to address it). This powerful subset of companies has been tremendously influential in dictating how the public understands (or misunderstands) climate science and how the national discussion on climate policy has progressed—or *not* progressed.

To address corporate interference and ultimately mitigate the impacts of climate change itself, the United States needs greater transparency in governmental and corporate affairs. This will not only help illuminate how extensively companies are influencing the political process but also will help hold them accountable for their actions. Ultimately, we seek a dialogue around climate science and policy that prioritizes peer-reviewed scientific information over the agendas of special-interest groups.

Union of Concerned Scientists
Citizens and Scientists for Environmental Solutions

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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
2397 Shattuck Ave., Suite 203
Berkeley, CA 94704-1567
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